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AND THE ALLIED ARTS AND CRAFTS.

VOLUME XII.

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THE ART OF CITY-MAKING.

UNDOUBTEDLY Washington had unique luck among American cities in its beginnings. It is the only one of them that was planned, and intelligently planned, with an eye to beauty as well as to convenience. The lower end of Manhattan Island grew as it was wanted, but the "wall" street and "the broad way" were indicated from the first, and supplied two comparatively stately thoroughfares. "They say the cows laid out Boston," as Emerson has it, "and there are worse surveyors." Philadelphia was "regularly laid out" from the first, and in 1807 all that part of New York, which, being above Fourteenth street, was regarded as *tabula rasa* by the layers-out, excepting only Broadway, "the Bloomingdale road," which was already too important and too much "improved" to be disregarded. The anomaly must have been viewed with pain by the projectors, who felt bound to respect it, and to withhold it from the rectangular reticulation with which they spread over the remaining surfaces.

New Yorkers of the present generation have reason to be thankful that the anomaly was permitted to stand. Broadway offers the only means of going up or down, and at the same time of traversing the island. But for it, the New Yorker would have in all cases to pursue the old-fashioned method of navigation of running his latitude and his longitude separately, being shut off from any diagonal course. What a pity that there was no counterparting avenue already too much important to be improved off the face of the island, whereby one could have gone from southwest to northeast. We are all agreed—all of us, that is, who pay any attention to such things—that the Commissioners of 1807, as we call them, though in fact their map, authorized in that year, was not filed until 1811, were public malefactors of high degree. Not one of the problems of communication or of housing that beset

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us that they did not either create or aggravate. It is a legend that at the beginning of their labors, when they were discussing a street system one of them laid a mason's sand-sieve upon the map of the island and triumphantly inquired: "What do you want better than that?" It would have been better for us if the mason's sieve at least had its openings square. Still better, as is often said, if the sand-sieve, when it was dropped upon the map of the island, had been turned the other way. With five times as many avenues, and one-fifth as many cross streets, how much better off we should have been than with a plan that assumes that we have five times as many occasions to cross the island as to go up and down in it. And an incident of the street system is the Procrustean city lot, four times its frontage in depth, which every tenement house reformer has found the chief stumbling block in his way, but which is now so firmly fixed in the subconsciousness of investors as the normal unit of space that it is impossible to dislodge it.

Doubtless they were great malefactors, these Commissioners, really incapable of taking thought for the morrow, really incapable of imagining what a city was like. It is not likely that any of them had even seen a city. If they had they had not looked at it. One of them, indeed, Simeon De Witt, had heard the names of a good many, for he it was who, as Surveyor-General of the State, named all Central New York out of the Classical Dictionary. But of the art of city-making not one of the Commissioners can have had the faintest notion, though it must be confessed that the present aspect of the city does injustice, even to its projectors. Where now is the "marketplace bounded northwardly by Tenth street, southwardly by Seventh street, eastwardly by the East River, and westwardly by First avenue." Where the Parade, "bounded northwardly by Thirty-second and Thirty-fourth, southwardly by Twenty-third, eastwardly by Third avenue and the Eastern post road, and westwardly by the Seventh avenue?" Where is Bloomingdale square? For that matter it is not easy to find what has become of Hamilton square on the east side, or of Manhattan square on the West, although these two and indeed Bloomingdale square, bounded by Fifty-third, Fifty-seventh, and Eighth and Ninth avenues, may fairly be held to have been superseded by the establishment of Central Park. The gridiron remains, interrupted only by Broadway. Those civic problems which relate to the housing and the movement of the population are not problems imposed upon New York by nature so much as by the dense ignorance of the art of city-making of the men who were appointed to make the city a century ago. They brought to their work so little knowledge, they put into it so little thought, that they seem to have treated it with great levity. There was no pretense of considering

the topography, none of forecasting the future growth of the city and the uses of its various parts, as these were indicated either by the topography or by the actual experience that had necessitated the appointment of the Commission. Here is actually all they had to say for themselves, as to their imposition of the whole system from which their successors suffer a century later:

"That one of the first objects which claimed their attention was the form and manner in which their business should be conducted, that is to say, whether they should confine themselves to rectilinear and rectangular streets, or whether they should adopt some of those supposed improvements by circles, ovals and stars, which certainly embellish a plan, whatever may be their effect as to convenience and utility. In considering that subject, they could not but bear in mind that a city is composed principally of the habitations of men, and that straight-sided and right-angled houses are the most cheap to build and the most convenient to live in. The effect of these plain and simple reflections was decisive."

Thus do ignorance and thoughlessness take the appearance of levity, of which there is no real reason to suspect the Commissioners. But one may reasonably suspect them of some disingenuousness in concealing a main motive to their recommendation, and that is that right angles are the easiest for a surveyor to measure, and that when it came to laying out and monumenting a whole Manhattan Island the difference in facility becomes enormous. One cannot much blame "Mr. John Randel, civil engineer," the professional adviser, and the only one, of the commission, for desiring thus to lighten his labors, which, as it was, extended over ten years, for it was only in 1820 that his work was completed. In fact, the earnest attempt of two more enlightened city makers, Mr. Olmsted, a landscape architect, and Mr. Croes, a topographical engineer, to correct the errors of the laying out of Manhattan in the laying out of The Bronx, were largely frustrated by this prosaic and, in view of the larger interests at stake, this trivial consideration. But the moral which these gentlemen drew, in their report upon The Bronx, from the failure to lay out a city on the island, is worth remembering and, so far as possible, of applying. Indeed their report, though itself now a full quarter of a century old, would be worth reprinting as a guide to public officials who have anything to do with controlling the development of that city, or of any other, old or young. It is a whole body of doctrine upon the art of city making. It is written with the candor and circumspection so characteristic of Frederick Law Olmsted, and it treats the existing street system of New York as, what it was in 1876 much more than it is in 1902, something imbedded in the consciousness of New Yorkers as a "fixed custom of the universe and general law of man," only to be dislodged by the clearest and most conclusive

reasoning, which the authors proceed to apply. They fully acknowledge not only that advantage of a rectangular plan which was conclusive and exclusive in the minds of the street commissioners of 1807, but its related advantages of ease of surveying and consequently of description for legal purposes. "Property divisions," they say, "have been generally adjusted to it, and innumerable transfers and pledges of real estate have been made under it with a degree of ease and simplicity probably without parallel." And then they go on to show how you cannot have anything worthy to be called a city on any such lines.

"Some two thousand blocks were provided, each theoretically two hundred feet wide, no more, no less; and ever since, if a building site is wanted, whether with a view to a church or a blast furnace, an opera house or a toy shop, there is, of intention, no better a place in one of these blocks than in another. * * * If a proposed cathedral, military depot, great manufacturing enterprise, house of religious seclusion or seat of learning needs a space of ground more than sixty-six yards in extent, from north to south, the system forbids that it shall be built in New York. * * * There are numerous structures, both public and private, in London and Paris and most other large towns of Europe, which could not be built in New York, for want of a site of suitable extent and proportions. There is no place in New York where a stately building can be looked up to from base to turret, none where it can even be seen full in the face and all at once taken in by the eye; none where it can be viewed in advantageous perspective. The few tolerable sites for noble buildings north of Grace Church and within the built part of the city remain, because Broadway, laid out curvilinearly, in free adaptation to natural circumstances, had already become too important a thoroughfare to be obliterated for the system. Such distinctive advantage of position as Rome gives St. Peter's, Paris the Madeleine, London St. Paul's, New York, under her system, gives to nothing."

And then the report goes on to point out the bad, in some respects the really awful social conditions caused or aggravated by the deep lot, the Procrustean unit of space which is itself a corollary of the Procrustean two hundred foot block. The report was a vigorous and in part an effective protest against extending to a terrain still more varied and uneven than that of Manhattan Island, the application, in complete disregard of the lay of the land, of the equable reticulation which has for its only possible purpose the impossible "attempt to make all parts of a great city equally convenient for all uses." and for its necessary result the making of all almost equally inconvenient for all uses.

It was probably in part the example of Philadelphia, which had been "regularly laid out" from the beginning, that encouraged the Commissioners of 1807 to lay out New York regularly. But much more reason went to planning Philadelphia than to planning

New York. The evils of the deep lot were there much mitigated, and the lay of the land is much less unfavorable to a uniform rectangular system. The injury of the street system in Philadelphia is mainly aesthetic, and consists in the depressing monotony under which it is impossible to get a glimpse or a "bit" or an accidental point of view. No wonder, when Philadelphia had a great building to erect, that she should have violated the system, and planted it squarely across two important streets, where it should force itself upon the sense, where it could itself be seen, and where it should emphatically interrupt the otherwise interminable vistas of the system.

The plan of the Commission for the "improvement of the park system of the District of Columbia" has brought freshly into public view the all-importance to a city of having a plan. That is the moral which Mr. Burnham has judiciously drawn in print from the labors of the Commission, of which he is one of the members, and whose work has so largely been to clear the original plan of Washington from the defacements which have been brought upon it by the ignorance and neglect and unconscious vandalism of a century. And yet it is to be noted that L'Enfant's plan was not the original plan of the capital, but an afterthought imposed upon it. The first commissioners of the district had "regularly laid out" the Federal City, with not much more expenditure of gray matter than had been before made by the projectors of Philadelphia, or than was afterwards made by the providers for the expansion of New York. That is to say, they had imposed upon the map the regular and equable gridiron, or rather sieve, for it is a reticulation of squares and oblongs. There are, indeed, differences of size among these, and even of shape, corresponding, apparently, to the expectation of the Commissioners as to which were to be fashionable and stately and which the humbler and more crowded quarters of the city that was to be. So far, and without regard to the accuracy of their foresight of the actual development of the city, their map shows consideration and providence, and has to that extent the advantage over the attempt of the New York Commissioners "to make every part of the city equally convenient for all uses." But then came L'Enfant, and tramped through the woods and over the marshes with Washington, seeking the most eligible sites for public buildings, considering that he was not merely providing for an indefinite agglomeration of human tenements, but planning a city, and a capital city, having behind him the memory and before him the actual plans of the capitals of Europe, and bearing in mind that a real city was an organism, a hierarchy of unequal but related and interdependent parts. Apparently he simply superposed the plan upon the reticulation, which the inexpert commissioners

FIG. 1. BIRD'S-EYE VIEW OF CENTRAL WASHINGTON AS IT WILL BE.

Lincoln Monument. Washington Monument, Panthcon. Capitol.

had imposed upon Washington, as, twenty years later, a like commission imposed its like upon New York. He did his work so well that it has stood the test of all this time, and that now the work of an expert commission has been mainly to vindicate it, to clear the execution of it from the defacements that have accumulated in the course of more than a century's ignorance and neglect, and to amplify and extend it according to its own indications and along its own lines. The "Observations explanatory of the Plan," engraved upon its margin, so nearly comprise the principles of the art of city making, as understood by this its earliest and most famous practitioner on this side of the Atlantic, that they are worth transcribing into plain print:

I. The positions for the different edifices, and for the several Squares or Areas of different shapes, as they are laid down, were first determined on the most advantageous ground, commanding the most extensive prospects, and the better susceptible of such improvements as either use or ornament may hereafter call for.

II. Lines or Avenues of direct communication have been devised to connect the separate and most distant objects with the principal, and to preserve through the whole a reciprocity of sight at the same time. Attention has been paid to the passing of these leading avenues over the most favorable ground for prospect and convenience.

III. North and South lines, intersected by others running due East and West, make the distribution of the City into Streets, Squares, &c., and these have been so contrived as to meet at certain given points with those divergent Avenues, so as to form on the Spaces "first determined" the different Squares or Areas.

It is really cruel to the memories of the New York Commissioners to contrast the pretence of jejune reasoning with which they try to conceal and defend their want of reasoning with this clear exposition of what the aims of the planner of a city ought to be, and how he should endeavor to make it an organism and not a mere agglomeration. It was the system of diagonal avenues superposed upon the rectangular street plan by L'Enfant that made the Federal City a city, a system roughly, but only roughly, of parallels and perpendiculars, varied in detail as the topography required. The topography established the "points first determined," the sites of the public buildings and the public places, and the stately avenues, the "show streets," were those which connected these points, combining use and ornament, accessibility and "reciprocity of sight." The "Congress House" was the most important of these. It was set upon the most commanding ground the district contained, and was the centre of such a radiation of streets that, in L'Enfant's scheme, no fewer than sixteen vistas converged upon it and were closed by it. And second to it in importance was the President's house, the centre of another system, while still a third

focus was furnished by the establishment, due west a mile and a half from the Capitol, due south a half mile from the President's house, of the site for the Washington monument, voted eight years before by the Continental Congress, and then expected to consist of "an equestrian figure." The subject of this votive effigy took the warmest interest in the planning of the city that was to be called by his name, such an interest that, in view of the proximity of the Custis estate, a later and less respectful generation would not have scrupled to describe the location of the capital city as "a real estate job," and the suggestion was not even then unheard. Washington and Ellicott, the surveyor, went over the ground and over the paper with the enthusiastic city maker. Doubtless Washington's own

FIG. 2. THE CAPITOL AND ITS PROPOSED APPROACH.

early experience as a surveyor made him a more intelligent critic than he otherwise would have been of L'Enfant's work, of which only the second and revised version commended itself to him. He was sufficiently masterful about the matter to find his landscape architect so, and to deplore on paper that men of artistic genius should almost invariably be "of an untoward disposition." His personal participation in the laying out of the "Federal City" amply warrants the present commissioners for re-laying it out in calling their original "Washington's plan."

The original plan of Washington, with the explanations of its author, is so clear, and so commends itself to whoever will give it any study on the spot, that it seems strange that it should have been so defaced and obscured, and that the expert commission now at

FIG. 3. THE TAPIS VERT.

Part of the proposed "Grand Avenue," leading from the Capitol to the Washington Monument. It is to be one mile and a half long and1,600 feet wide.

last appointed ostensibly "for the improvement of the park system of the District of Columbia," should have found its work to be one primarily of rescue and reclamation. But the fact seems nevertheless to be that, no sooner had the generation of men who were personally cognizant of the plans and purposes of the founders of Washington passed off the stage than the scheme, so far as it had not been actually determined by execution was as if it had not been. The first notable and positive violation of the plan was to interrupt Pennsylvania avenue, which has always, within the memory of man, been distinguished in Washington as "the avenue," of which the primary practical purpose was to secure direct communication and the primary aesthetic purpose was to "preserve reciprocity of sight" between the Capitol and the White House. The personal interference of Andrew Jackson is alleged by plausible tradition to have been responsible for the vandalism by which the Treasury building was so placed as to bar the way, to interrupt this avenue, to make communication between these "spaces first determined" indirect and absolutely to hide these great buildings from one another. But a generation later was another piece of vandalism committed that showed an equal ignorance or levity, in the placing of the Congressional Library where it neither confronts the Capitol nor preserves any reciprocity of sight with it, and where it stops one of the most important vistas carefully arranged by L'Enfant to be closed by the Capitol, the southeast view from the prolongation of Pennsylvania avenue. The appointment of an expert commission would have been amply justified if it had no other result than to ensure the city and the nation against the repetition of such malefactions as these.

But these are only details. The most remarkable malefaction is one mainly of omission. To look even cursorily at the original plan is to see how great was the importance, in the minds of its authors, of the strip reserved, and ever since known in Washington as "The Reservation," from the Congress House to the Washington monument. This was the "Grand Avenue" of L'Enfant, flanked by his "well-improved fields," the intended route for inaugural and other stately processions which, from time immemorial, have taken the shabby and now circuitous route by Pennsylvania avenue. For fifty years it has quite faded from the minds of Congress what this wide, straight strip was "reserved" for, and Congress proceeded to dispose of it, as if it had been a reservation in a Western wilderness, instead of in the capital of the nation. The Smithsonian was planted in it half a century ago, and the grounds were laid out under the direction of Andrew Jackson Downing, in the irregular and naturalistic fashion which he introduced, which is as appropriate to the irregular Norman architecture of

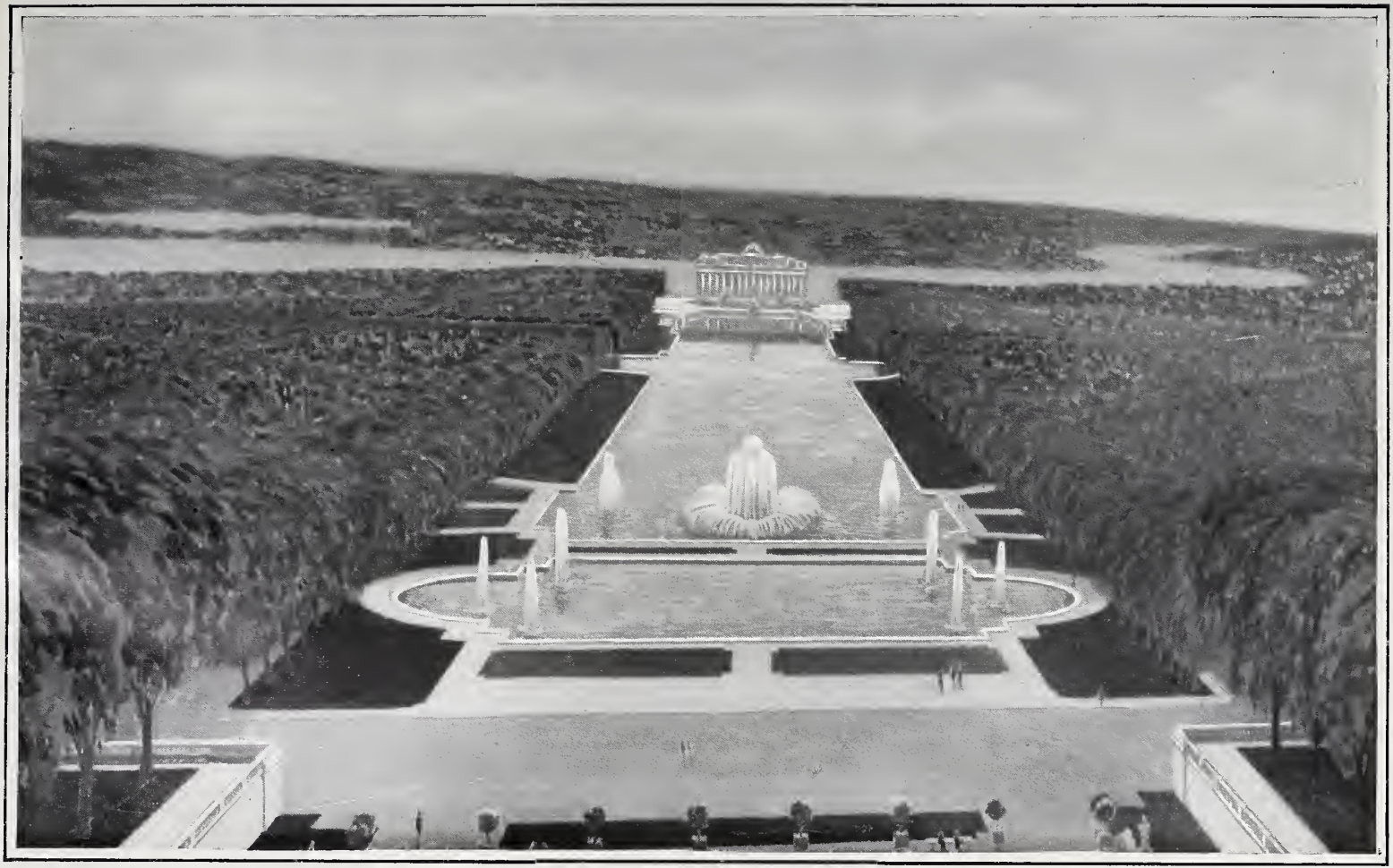


FIG. 4. LOOKING WEST FROM THE WASHINGTON MONUMENT.

The building in the distance is the proposed Lincoln Monument. The pool in the foreground and the canal beyond are the most important water features of the new design.

Renwick as it is inappropriate to the public architecture of Washington in general, and as it is "from the purpose" of the original plan, under which a more formal and symmetrical gardening is really imposed. Afterwards came the National Museum, which it has not occurred to anybody to admire on architectural grounds. And between these, in point of time, came the concession to the Pennsylvania Railroad of a transverse strip across the centre of the reservation which absolutely destroyed and nullified the intention of the original designer. This intention it would not have been possible to recur to and execute, if the present President of the Pennsylvania had not, as the expert commission puts it, "looked at the matter from the standpoint of an American citi-

FIG. 5. LOOKING SOUTH FROM THE WHITE HOUSE.

zen," and taken out of the way the otherwise insuperable obstacle to the rescue and execution of the central and most monumental feature of the original plan. This feature, which had been ignored for two generations, is a strip of land a mile and a half long and 1,600 feet wide; that is to say, twice as long as the parked part of the Champs Elyseés, and three hundred feet wider, and every traveler knows how stately is the effect of the smaller dimensions under judicious treatment.

If the present commission had done nothing else than to procure the restoration to its intended public purpose of this stretch of ground from the Capitol to the Potomac,

> Defamed by every charlatan,
> And soiled with all ignoble use,

it would still be entitled to the gratitude of the country. Doubt-

less the members of the commission would be willing to divide their honors in this respect with the American Institute of Architects, which suggested their appointment, and with Senator McMillan, the chairman of the Senate Committee on the District of Columbia, to whose enlightened public spirit is due the initiation of the project for the comprehensive treatment of all the embellishments of Washington; and doubtless he in turn would be willing to subdivide them with Mr. Charles Moore, the accomplished clerk of that committee.

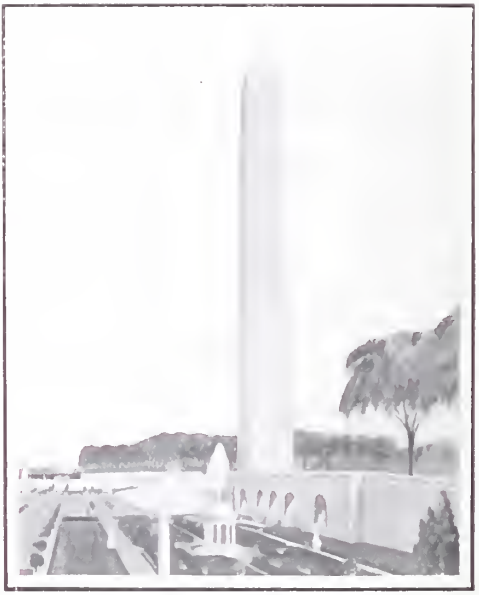
"From the Capitol to the Potomac," I said just now. But that means much more now than it meant a century ago. One of the "spaces first determined" by L'Enfant was the site of the monument yet to be, and that was established upon the river shore which the White House grounds then actually skirted. The monument, originally expected to be an "equestrian figure" has been converted into the tall shaft we know, and has been moved so as to be neither in the axis perpendicular to the centre of the Capitol, nor in that perpendicular to the centre of the White House. The engineers who investigated the foundations, and established the monument accordingly, probably gave no more thought than anybody else did at that time to the motives that led L'Enfant to mark the intersection of these two lines. As Mr. Burnham has it, they thought that "about there" would be a good place. At any rate, they put upon the modern experts who undertook to execute the original plan the task of dissembling the irregularity so that it should not appear in execution but only on paper, and a study of their plan shows the number, the ingenuity and the success of the devices they have employed to that end. But the original plan, the "Grand Avenue" from the Capitol to the river, the President's Park on one side and the "well-improved fields" on the other took the shape of a T. Meanwhile, during the century, the reclamation of the marshes has been going forward,

> Regis opus, sterilisve diu palus aptaque remis
> Vicinas urbes alit et grave sentit aratrum,—

until there is a mile of firm land beyond the site of the monument. The area thus reclaimed at once suggests and enables the conversion of the T into a cross. At the head of the cross, on the new shore, a mile from the monument, two miles and a half from the Capitol, is projected the memorial to the only American whose monument would not be an anti-climax after that of Washington. The Lincoln monument is sketched as the periptery of a Grecian temple, without the cella, of which the place is taken by an exposed and seated statue of the Liberator. It was a suitable project to take this monument, with its spreading ranges of colonnade, quite out of competition with the aspiring shaft at the

crossing. The head of the cross provides for "the stately canal" of the original plan, which itself becomes cruciform, while in front of the Washington monument appears a pool in which it shall be mirrored from the west.

The ornamental use of water was a great point in the original design and is a still greater point in the revised design, even in this central part of it with which we are concerned and to say nothing of the introduction of the Potomac into the parks beyond the arms of the cross, or the "water park" proposed for the upper stretches of the Anacostia. L'Enfant's scheme was very grandiose of pumping the water from the creek in the northeast to the Capitol grounds, where after watering that part of the city "its overplus will fall under the base of that edifice in a cascade of 20 feet in height and 50 in breadth, thence to run in three falls through the garden into the Grand Canal." For his "grand fountains, intended with a constant spout of water" he relied upon the "above twenty-five good springs of excellent water within the limits of the city." But, in addition to the pool and the canal to the westward of the Monument and along the head of the cross, the present Commission proposes an adequate aqueduct as an essential of its plan, and a water supply that shall serve every purpose of public ornament as well as of private use.



SUNKEN GARDEN WEST OF THE WASHINGTON MONUMENT.

The reclamation of the Potomac flats allow also of the extension of the southern arm of the cross far beyond the limit imposed by what were then the extent and conformation of the shore, upon the original plan. The shape of the reclaimed land suggests the balancing of the existing New York Avenue, and a new street across the new land connecting it with the Lincoln monument, by like streets on the south side, thus inscribing a symmetrical pentagon between the arms and the head of the cross. At the round point which accrues at the end of the southern arm, facing the

White House across a mile of park, it is proposed to build the monument to the Founders of the nation, "Aux grands hommes la Patrie reconnoissante," and this quite naturally takes the form of the original Pantheon, which was moreover adopted by the most famous of the founders, after Washington, for the library to his University of Virginia, as, in his own words, "the most perfect example of the spherical." Beyond the arms of the cross, the whole space is devoted to public parks, and the Lincoln monument at the head forms the point of departure for the ramifications of the park system, one branch of it leading off northward up the Potomac, and another, the Memorial Bridge, moved down stream from the line originally proposed for it, stripped of its towers and arches and converted into a low and inconspicuous "caterpillar

FIG. 6. THE ROUNDPOINT AT THE SOUTHERN ARM OF THE CROSS, SHOWING THE PROPOSED MONUMENT TO THE FOUNDERS OF THE REPUBLIC.

bridge," with even its draw left unmarked by any architectural feature, pointed southwestward to Arlington House.

But this is not the only amplification. There is an increasing pressure at the capital for sites for new public buildings. Whenever one comes to be decided on, immediately begins a hunt for a site, and generally some bit of park is seized upon as in the line of least political or commercial resistance. It is very absurd, considering how ample is the supply of sites for public buildings in the original plan, the purpose of which has been so long and so completely ignored. As L'Enfant himself explained, "the positions for the different Edifices" were among "the spaces first determined," and his notion seems to have been that each department building would become the centre of a quarter of its own. In this view the Patent Office and the General Post Office were properly

FIG. 7. PROPOSED PANTHÉON TO THE FOUNDERS OF THE REPUBLIC.

It will face the White House, about a mile away. At its back is the roundpoint shown in Fig. 6.

placed, and certainly the Doric portico of the former stops the vista of a street very advantageously. But these are the only exceptions to the rule of nonconformity. And it is clearly out of the question now to endeavor to recur to this feature of the original plan. The Commission has found a more excellent way. In the first place there are the bordering spaces of the Grand Avenue, now become "The Mall," which outside of its central green carpet, with its flanking colonnades of elms, will give ample room on each side for a row of public buildings, thus far occupied only by the Smithsonian, the National Museum, and the building and grounds of the Department of Agriculture. These spaces the Commission proposes to devote to "white marble buildings devoted to the scientific work of the government," and to "museum and other buildings containing collections in which the public generally is interested, but not to department buildings." These latter should be concentrated, logically and for convenience, at the Executive quarter, near the White House, already flanked by the Treasury and by the State, War and Navy building. These two were established in violation and defiance of the general scheme, but that is now past praying for. The thing now to be done is to extend northward, by the acquisition of Lafayette Square, and gradually to complete, the quadrangle of which they form parts of two sides and of which one end is the White House and its grounds, taking care to preserve all the vistas which the builders of these two ruthlessly disregarded. The need of expansion of the Executive departments seems thus to be supplied for some generations to come. The building most urgently needed is that already planned to accommodate the State Department, the Department of Justice, and the apartments for the public and official uses of the President, leaving the White House for his private residence. At "the other end of the avenue" there is an equal pressure for room for the uses of Congress. Time was when members of Congress transacted all their business either in their committee rooms or at the desks placed in their respective chambers, to the great detriment of the primary purposes of those chambers as arenas of debate. The House, in particular, is physically incapacitated for this purpose by the number of its members, and by the fact that the desk of each of them can be and is used for the transaction of the private or public business of its occupant, without reference to the proceedings on the floor. A speaker has to shout in order to be heard. A debate in the House is accordingly shocking to the stranger in the galleries, from which the House bears much more the aspect of a bear garden or of a Stock Exchange than of a deliberative assembly. All the recent reformers of this condition of things, including Mr. Hewitt, have agreed that the only way in which the

body could be brought back to its primitive purpose was by supplying, outside of the Chamber, facilities for the business of the members unconnected with the debate in progress, and to assimilate the House of Representatives in this respect to the House of Commons. That House cannot even hold all its members, and those of them who have occasion to write anything have to do it on their hats. The committee rooms have been far outgrown by the requirements of members, and it has come near to being informally recognized that every member of Congress is entitled to an office at the public cost, at which cost a building facing the grounds of the Capitol is already thus occupied. At any rate, if the sound rule laid down by the Commission is adopted, "that only public buildings should face the grounds of the Capitol," it is quite certain that enough such buildings will be required, more or less directly related to the uses of Congress, to occupy the available spaces on the plan of the Commission of respecting the disposition, keeping open the vistas, and "preserving the reciprocity of sight" provided for in the original plan of Washington and so lamentably departed from in the placing of the Congressional Library, the only public building that thus far faces the grounds of the Capitol.

But there are other public needs than those of the executive and Legislative departments. There are the local architectural requirements of the City and the district. These are rather shabbily met by the brick structures on the north side of the Mall, and between it and Pennsylvania Avenue, and very painfully and outrageously met by the city post office, the most discreditable building, always excepting the Pension Bureau, erected by the government at the capital. Mr. Mullett committed a public malefaction, in the Sate, War and Navy building, by arbitrarily and inappreciatively changing the scale, and to some extent the style of the public architecture of Washington, in subsituting for the single order which before gave the scale and determined the style the superposed orders of the Flavian amphitheatre, an error which the architects of the Library had the discretion to avoid repeating, and to revert to the normal. But Mr. Mullet's offense is nevertheless inoffensive and venial in comparison with that of his successor who projected the Washington post office, and who thought the occasion suitable for bestowing upon the city an ugly and illiterate example of Richardsonian Romanesque, in which there is nothing intrinsically attractive excepting the triple porch, and which is of a violent incongruity with every other public building in the capital. Moreover, the whole triangle between Pennsylvania and the Mall has degenerated into a slum and disgrace to the city. The whole of it the Commission proposes that the Government shall re-enter, and equally the corresponding triangle on the

south side of the Mall, bounded by Maryland Avenue. With the inclusion of the pentagon beyond the arms of the cross in the park system, the cross is thus expanded to a kite, and the reservation becomes three or four times as great in area as the T which is the nucleus of it in L'Enfant's original plan.

Evidently all this is not to be done soon or done cheaply. Evidently a great deal of time and a great deal of money will be needed to complete the execution of the plan thus rescued and amplified. The authors can scarcely hope to see even the first and most important of their intended effects realized in the growth to maturity of the four live colonnades of elms that are to border the Grand Avenue from the Capitol to the White House. It is not neces-

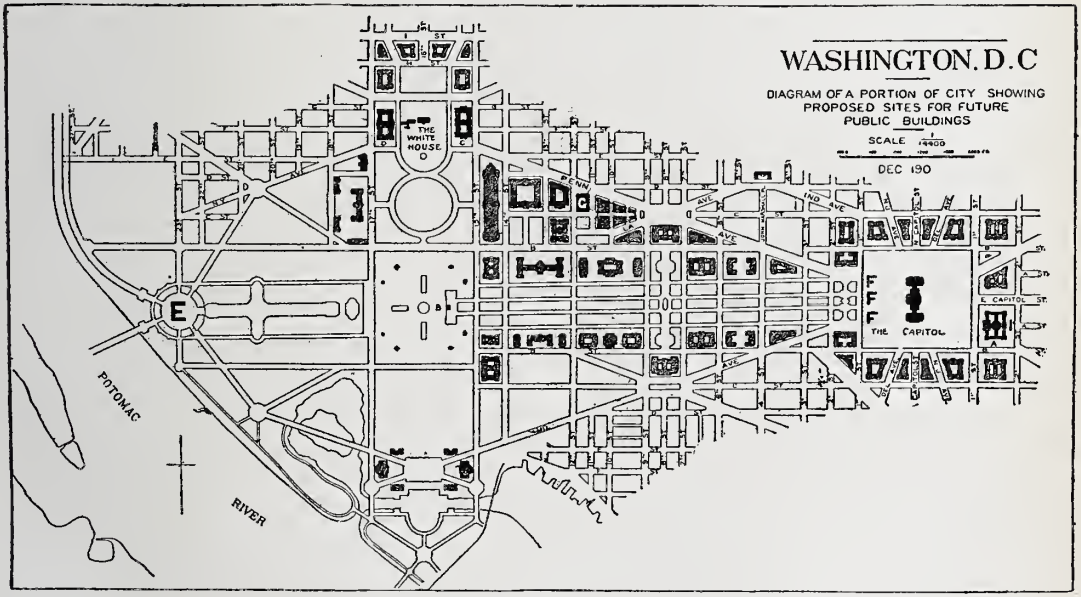


FIG. 8.

sary, though of course it is very desirable, that the execution should be begun at once. But it is necessary to the beauty and worthiness of the capital that the plan should be adopted at once and that the Congress should commit itself to the plan, and determine that all future improvements shall be made in accordance with it. To count the cost of a project that will not be fulfilled for generations would be waste of gray matter. It befits a nation to take long views. And the cost of completing this plan, enormous as it would ultimately be, would be a bagatelle to the nation that now is, compared with the cost to the nation still "struggling to be born" for the future capital of which L'Enfant took such long views, without pretending to count the cost, as to subject himself and his

FIG. 9. THE WASHINGTON MONUMENT.

One of the great objects of the design is to give the Washington Monument a fitting approach and surroundings. It will be mirrored in the pool between it and the Lincoln Monument.

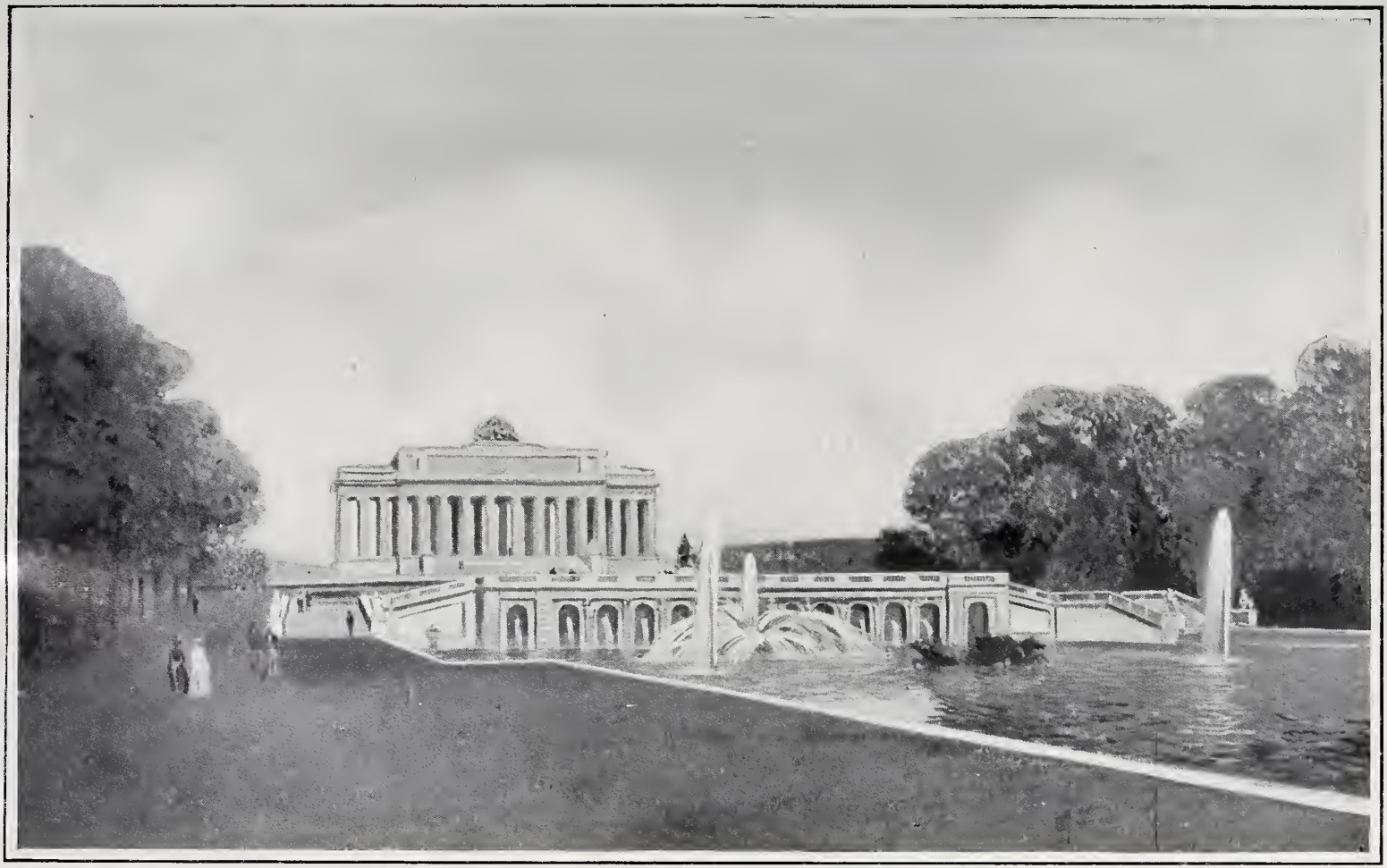


FIG. 10. THE LINCOLN MONUMENT FROM THE EAST, SHOWING THE PROPOSED BASIN.

Beyond the monument is the river and the Memorial Bridge.

plan to the ridicule of those who held that the capital would never grow up to a plan which already, as we see, the capital has outgrown. That the scheme is noble and adequate is the belief of all who have studied it. It provides sites not only for all the public buildings which the capital is likely to need for another century, but also for commemorating the heroes of future generations, as well as those already in being. At the foot of Capitol Hill are already shown in the plans the equestrian figures of Grant, Sherman and Sheridan, and in the course of execution other sites for the effigies of other heroes will accrue, and it will be feasible to establish them according to some definite iconical scheme. The more discouraging, and also the more characteristic of the inappreciation of Congress which has made necessary the appointment of a Commission to retrieve its defacements of the plan of the capital, that, even since the report of the Commission, and the exhibition of its work, at least three bills should have been introduced into that body, providing for statues to Longfellow, to Paul Jones, and even to L'Enfant himself, which proceed in the old stupid way of empowering the chairmen of the two committees on the Library, the Secretary of War, and (in one case only) the officer in charge of public buildings and grounds, to select the site and the design. To add three more to the sporadic effigies of Washington, when a competent body exists to place them according to a systematic plan, would be to sin against a blaze of light.

Not only should the Commission be perpetuated to supervise the execution of its own plan, but a further step should be taken which is even more repugnant to our Anglo-Saxon notions of individualism, if the project is to have its perfect work. The supervision, in the interest of beauty, must be extended to private as well as to public building. Uniformity and conformity are sufficiently provided for in public buildings by the proposal of the Commission that such buildings shall have a common material, a common cornice line, and a common classicism of style. But there is no use in doing these things by halves. The individual owner must be prevented, in the general interest, from using his own so as to injure another, when the injury pertains to the appearance of the city. That awful example of individualism, the Cairo apartment house, long ago illustrated and denounced in your pages (Architectural Record, Vol. IV., No. 4), is only an extreme example of a tendency of which there are other examples only less flagitious. Even now there is going up in Farragut Square an apartment house which would not be allowed to be built in Paris, and which ought not to be allowed to be built in Washington. Unless the individual builder can be restrained and coerced to a conformity which no architectural artist would find irksome, we simply cannot

FIG. 11. ON THE RIVER SHORE, SHOWING THE PROPOSED LINCOLN MONUMENT AND THE MEMORIAL BRIDGE.

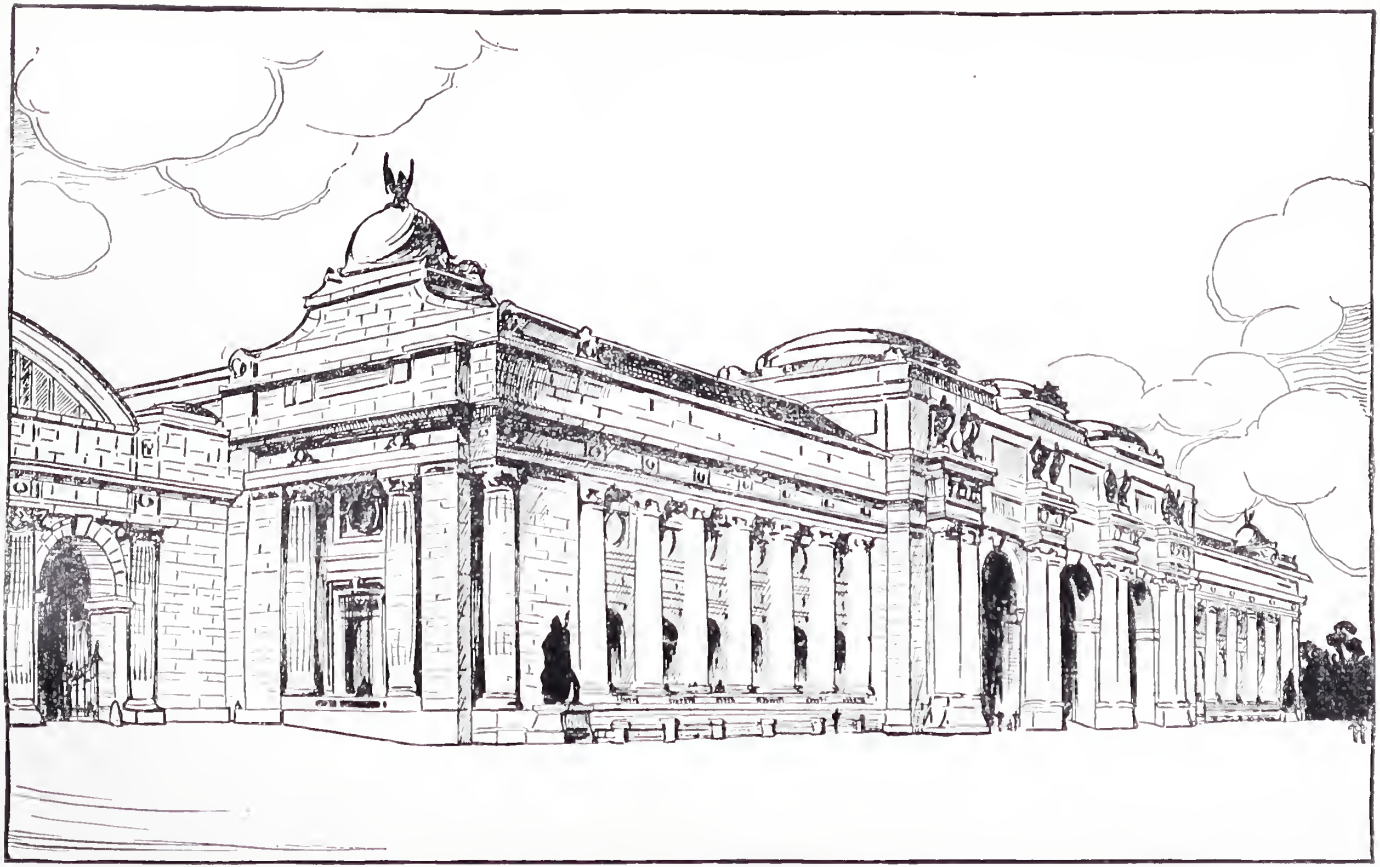


FIG. 12. THE PROPOSED NEW UNION RAILWAY STATION.

It will accommodate both the Pennsylvania and the Baltimore & Ohio trains. Its cost will be shared by the government, and its construction will render possible the reclamation of the "reservation."

have in Washington what otherwise we may very reasonably hope to have, "the most beautiful capital city in the world."

Meanwhile, we can have nothing but praise for the magnificent scheme of Messrs. Burnham, McKim, Olmsted and St. Gaudens. Their part in the making of a beautiful city has been so well done that they already deserve to be ranked with L'Enfant in the gratitude of Washingtonians and of all Americans who wish to be justified of their pride in their capital. To compare what can so easily be made of with Washington with what the planners of New York doomed that city to is to resent the weight of "the dead hand." Nobody will ever propose statues of any of the Commissioners of 1807. And yet to consider the magnificent results of the vindication of L'Enfant by the removal of the defacement

THE LINCOLN MONUMENT FROM THE RIVER.

which ignorance and neglect had accumulated upon his plan is to wonder whether something may not still be done to mitigate the mischiefs of the street plan imposed upon New York. What an enormous advantage, in convenience, as well as in dignity and stateliness, might even now be gained by the opening of two diagonal avenues, from the "feet," say, of Fourteenth Street to the feet of Fifty-ninth, offering sites for stately buildings where they could really be seen, and forming at their intersection the unquestionable centre of New York. What a pity and what a shame that the reservation which would have cost comparatively nothing a century ago would now have to be done by the tremendously costly process of Haussmannization. But it is worth recalling that from even this tremendous expense thrifty Paris did not shrink,

when the question was of adding attractiveness to itself; nor thrifty Vienna when it laid out the Ringstrasse and the Gurtelstrasse. It would be difficult to find to-day a Parisian or a Viennese who thinks his city made a bad municipal investment.

Montgomery Schuyler.

RICH MEN AND THEIR HOUSES.

WHAT is to become of the great American millionaire? Is he a permanent as well as a portentous social fact, or will his accumulations go the way of the splendid fortunes of Jacques Coeur, and the Fuggers? And if he prove perishable, will his fall be caused by his abuse of power, by the envy and covetousness of his poorer fellow-countrymen, or by the political and industrial failure of the American republic?

I am asking these questions, not because I am able to answer them, but merely to bring out the fact that the American millionaire (and his wife) are socially speaking an experiment. At the time of De Toqueville he was unknown, and unanticipated; even in 1860, he was only an occasional product of local conditions; but during the past thirty years he has rapidly broken through the level crust of American society, and has puffed out and multiplied until he is a type, the shadow of which covers the face of the land. The wonder is that he should have waxed so big in so short a time. In a few cases the first generation has been succeeded by the second or even the third; but for the most part the great American fortunes are still in the hands of their architects; and the perpetuity of these fortunes, their reaction upon their possessors and upon our plastic American society are still merely matters of guess-work.

The salient fact about these millionaires (and their wives), is that their incomes are much larger than any sum which they can possibly desire to spend upon themselves or their families. John Jacob Astor, the first of that name, said, or is said to have said, that a man with $25,000 a year is just as good as if he was rich—whereby he obviously meant that a man with such an income was in a position to buy everything necessary to the happiness of himself and his

dependents. At the present time one would have to multiply that figure by ten in order to get an income which would purchase what, according to current standards, may be called reasonable luxuries, but whatever limit we put upon the income of a man who is just as well off as if he was rich, it is obvious that the incomes of the prominent American millionaires (and their wives) are far in excess thereof; and this is not only the salient fact of the situation; but it is in some measure unprecedented. In no prosperous society of the past has there ever been very many merchants whose incomes exceeded an amount which enabled them to buy all that an inflated idea of their social station demanded. For in that case, either the motive of accumulation disappeared, or else their fortunes excited the cupidity or the fear of the ruling powers. In contemporary England, for instance, there are some few fortunes, both old and new, which rank with those of the big American millionaires; but they are lost in an average of well-to-do people, who have as much money as they need, and would rather occupy themselves with spending what they have than with further accumulation. Americans, on the other hand, have had peculiar opportunities of making money, and are only beginning to busy themselves with spending it. The millionaires, and in many cases their sons, have so far declined to become annuitants. They keep on playing the game, because they like it, and without any reference to its subsequent personal or family use.

What manner of superfluity the descendants of these men will want to buy with their vast fortunes cannot but have a profound influence for good or bad upon American social and political life. If, for instance, as a class they attempted to buy political power, they would be sure to ruin either American democratic institutions, or else themselves. They have doubtless put those institutions to a severe strain already by purchasing as much political power as they needed to build up their own fortunes; but they have not sought that kind of power for its own sake, and there is no indication that they propose to do so. There is even as yet no reason to believe that, momentous as is the political problem presented by these vast masses of personal and corporate wealth, its solution will try American institutions as severely as did the settlement of the slavery question. For the millionaires (and their wives) are not an incongruous and alien element in American society. They are differentiated from their fellow-countrymen chiefly by their wealth; even their exceptional abilities are probably much overrated. There is no part in the whole dramatis personae of historical histronics, which they are less prepared to play than the part of a Napoleonic plutocrat. On the contrary, American millionaires, however daring, aggressive and original they may be in

the conduct of their business affairs, are for the most part well-meaning, and good-natured men, whose standards are too often deplorably low, and who directly or indirectly are responsible for much political corruption, but who are as distinctly the victims of public opinion as are the great American majority. In a sense they do not dare to be very bad; their faults are commonplace like their virtues. They share the average American's leaning toward reputable affairs, and are content that the results, rather than the purposes should be exceptional.

The millionaire is as little of a revolutionist in social as in political matters. He confines his enterprise to his business. In intellectual, artistic and moral affairs he lives by tradition alone. His attitude is a curious compound of somewhat contradictory motives. His very deep-seated desire for excellence in whatever he does or has, is diverted by his lack of social self-confidence into these traditional and conventional channels; and the result is a social type entirely different from the parvenu of literature. He does not try to cover up his sense of his own newness merely by vulgar ostentation, or as he perhaps would in an older and aristocratic, country, by an attempt to buy his way into society. What society he wants, he has; for the rest he prefers to remain a business man. But he does wish to emancipate his children and his fellow-countrymen from the reproach of being raw and new; and consequently he tries in every way to bring to bear upon them historical and traditional influences. He wants them to acquire and to realize more of a past than a few hundred years on a new continent can afford; and he wants to make that past something to be seen and felt. So he distributes enormous sums of money for educational purposes; he and his family are frequently abroad; he often becomes an ambitious collector of pictures and "objets d'art;" and particularly in all aesthetic matters, he wants things with a European reputation.

His desire to be fortified in his purchases by the solid ramparts of a European reputation is the salient fact about his interest in plastic and decorative art. This is particularly the case with the sort of things with which the American millionaire (and his wife) wants to be surrounded at home. In brief, what he seems to like are almost exclusively things rich in historical associations. One must, says M. Paul Bourget "recognize the sincerity, almost the pathos of this love of Americans for things about which there is an atmosphere of time and stability. * * * In this country, where everything is of yesterday, they hunger and thirst for the long ago, and under such surroundings, it is almost a physical satisfaction, as I felt myself to meet the faded colors of an ancient painting or the softened shades of a mediaeval tapestry." The consequence is that

the houses of rich Americans are filled with the spoils of European churches and palaces; and the man who twenty-five years ago was perhaps a penniless office-boy eats his meat from a table at which the Bourbons may have dined, and toasts his feet at a fireplace that may have kept the Malatesta warm.

It is a curious contrast—all the more so when one considers, not only the aesthetic contrast involved, but also the economic and moral contrast. The man sitting in that high-backed gilded French chair reading his morning paper may have a personal income much larger than that of any of the Italian potentates of the Renaissance; he is paying for his chairs, his tapestries, and his fireplaces a sum that had Lorenzo Medici paid them, would have made the Italian politically powerless; and he is paying these sums for objects, which in themselves he does not particularly value. What he wants, as I have pointed out before, are the associations and the background. He has none of the connoisseur's enthusiasm for the thing itself, its exquisite proportions, its delicacy of color or its refinement of detail; and his self-distrust gives him the knowledge of his ignorance. Consequently he uses the same methods to buy them that he would use in the case of a mine, the value of which he was doubtful. Just as he hires an expert mining engineer to report on the value of the mine, so he hires the services of architects and decorators, who know the values of old tapestries and furniture; and he gives these experts commissions to buy the best things and plenty of them. Within limits this employment of expert decorators is natural, appropriate, and customary; but it is a kind of specialization, which should not be carried too far. A person with a native love of beautiful things could not leave the furnishing and adornment of the rooms in which he lives and sleeps so completely in the hands of other people—no matter how competent. American art would be very much more benefited by an ounce of individual taste and discrimination on the part of rich men, than it would be the purchase of a pound of expert assistance for in the former case, the millionaire would give something more than money to the service of the arts; he would give a little of his own ability, enterprise and energy. We may be sure that art will never flourish among a people who derive their aesthetic likes and dislikes from historical text-books, and who hire other people to buy and arrange tapestries and furniture for their personal use and admiration.

The method often results in the making of houses, which are extraordinarily complete and beautiful. There are several American designers, one of whom is responsible for the house of Mr. Henry W. Poor, illustrated in this issue of the Architectural Record, who are capable of using the rich and splendid materials of the past with so just a sense of their values that the rooms they decorate and

furnish obtain the fresh and complete propriety of a new creation. For the old materials are used in new combinations and in rooms of different atmosphere and proportions; and unless, as frequently happens, they are to appear completely out of place, the effect they produce must be moderated in the direction of simplicity and even homeliness. Well! there are rooms in New York in which such an effect of simplicity and even homeliness has been obtained by use of materials which were designed to create a very different effect; but with all the good taste and ingenuity of some American interior decorators, such rooms are necessarily rare. For as a rule these elaborate and sumptuous houses, which are full both of modern improvements and ancient relics, are designed irrespective of the personal character, and in a sense the social position of their inhabitants. The decorators are content to arrange rooms that are in themselves, convenient, beautiful and distinguished. Then the owner with his plain business suit, his prosaic occupations, and his daily newspaper can fit himself to his house as best he may; and he generally fits his house about as well as his loose trousers fit his legs.

This criticism is obvious, and in spite of some exceptions, sound; but it will not do to make too much of it. The standards of interior decoration in this country are as unsettled and as transitional as those of exterior design; and nothing is more natural than that at first attempts should be made to disguise the experimental character of the work under the panoply of good historical materials and styles. And just as on the whole it is an excellent and creditable instinct, which impels rich Americans to seek the respectability of surroundings which are as time-honored and well established as they themselves are new and experimental, so the instinct which leads American decorators readily to adopt the historical styles, which their clients want, is founded upon a very real and very general aesthetic need. In no direction are the Americans of the present day satisfied with their inherited culture. They have been seeking scholarship in Germany; technical art training in France, and historical models and styles all over the world—but particularly in France and Italy. In so doing they have only followed the example of the peoples of other countries, such as the French in the 16th Century, who, under somewhat similar circumstances, have gone abroad for aesthetic models, which they could not find at home. There is a difference, of course. These other countries already possessed native aesthetic traditions, with which to moderate any tendency to excessive imitation; and they generally had no temptation to adopt masters and traditions derived from more than one source. We Americans, on the other hand, lack any native aesthetic models, except those broadly designated as colo-

nial, and when we start abroad for our models, the choice is frequently so difficult that we merely remain at sea. All this increases the danger of the imitative practice and habit, and will make it the more difficult for American architectural and decorative art to reach any decisive originality of treatment, or any certainty and propriety of style. The easiest thing to do will always be to keep drifting on the sea of imitation and eclecticism; and the creation of vigorous native traditions will require a degree of enthusiasm and self-devotion, of which there are not as yet very many indications among American artists.

Yet most Americans will refuse to believe that American architectural and decorative design will not in time obtain more appropriate results along more original lines. They realize that their countrymen have exhibited no lack of energy and originality in those occupations which were more immediately essential to the life and growth of a young and expanding industrial society; and it is a fair inference that this initiative and vigor will in time infect the derivative social activities, which are already well established. The great thing necessary is to remove the sense of strangeness and unfamiliarity with which the average American approaches anything in the nature of art. American individuality does not as yet find freedom of action in that region just because of its unfamiliarity and remoteness; and hence for fear of being ridiculous and because of their inability to know their own minds, Americans buy French pictures, and foreign stuffs and furniture. In the long run this will not do. American millionaires are not public officials, like the Italian potentates, whose possessions they purchase; they are generally modest and retiring private citizens, who do not relish the notoriety they obtain and who should wish to make the paraphernalia and trappings of their lives as modest and homely as they themselves really are. Whether their great wealth and the social position it entails will in the end spoil this present simplicity and make them desire more ostentation, it is too early to predict; but if we are going in for prediction, it does no harm to predict something that is really desirable. Perhaps the children of these men and their children's children after growing up in the surrounding we have been describing, will become accustomed to good things, will form definite and justifiable tastes of their own, and will little by little cause houses to be built for them that are not "standardized" on historical lines, but which will add to the virtues of correctness and distinction, the crowning virtue of appropriate originality.

Herbert Croly.

The House of

HENRY W. POOR, Esq.,

No. 1 Lexington Avenue,

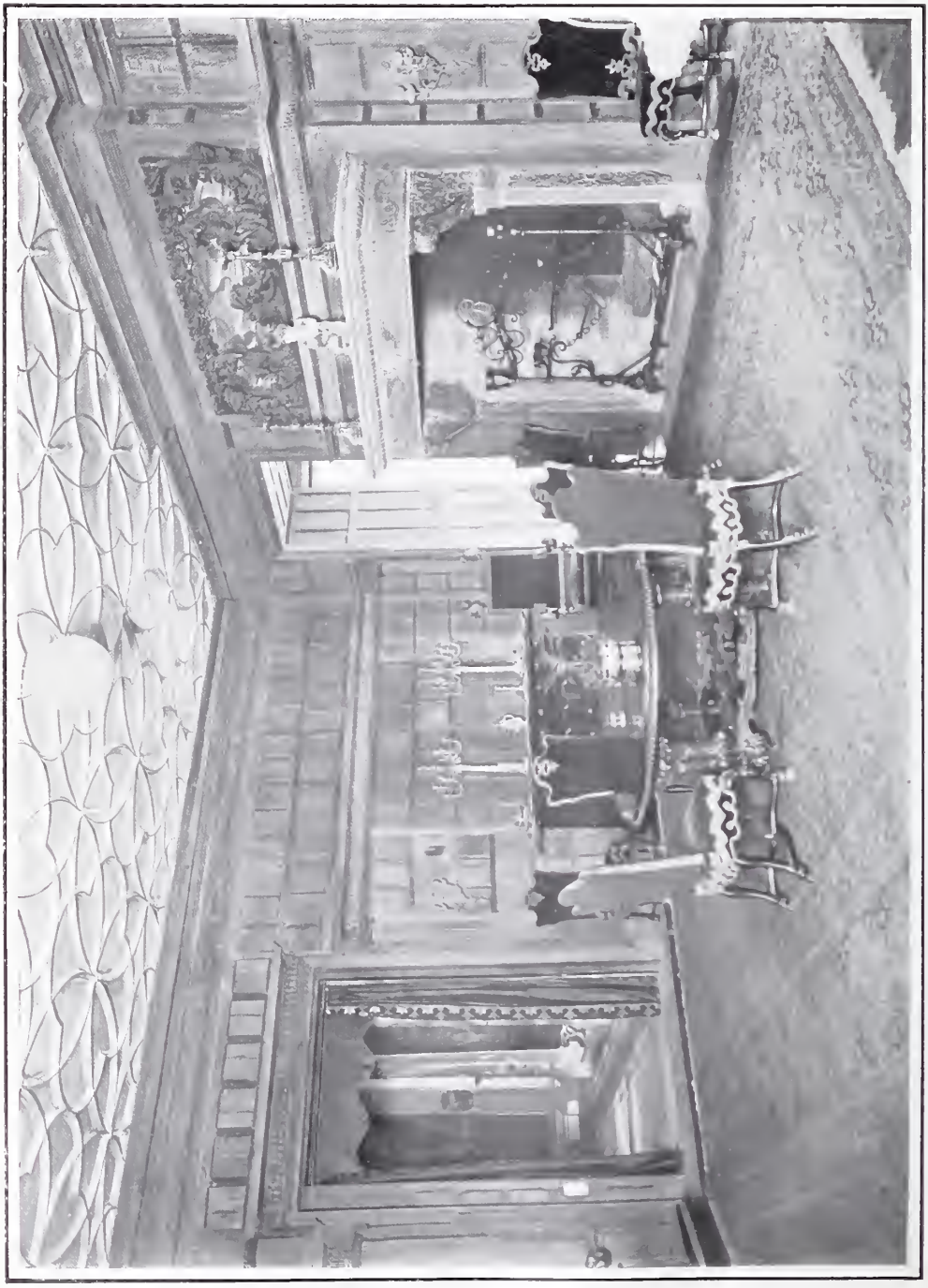
New York City

Architects, McKim, Mead & White

ENTRANCE HALLWAY.

House of Mr. Henry W. Poor. Architects, McKim, Mead & White.

House of Mr. Henry W. Poor. A WRITING ROOM. Architects, McKim, Mead & White.



House of Mr. Henry W. Poor. THE DINING ROOM. Architects, McKim, Mead & White.

House of Mr. Henry W. Poor. THE DINING ROOM. Architects, McKim, Mead & White.

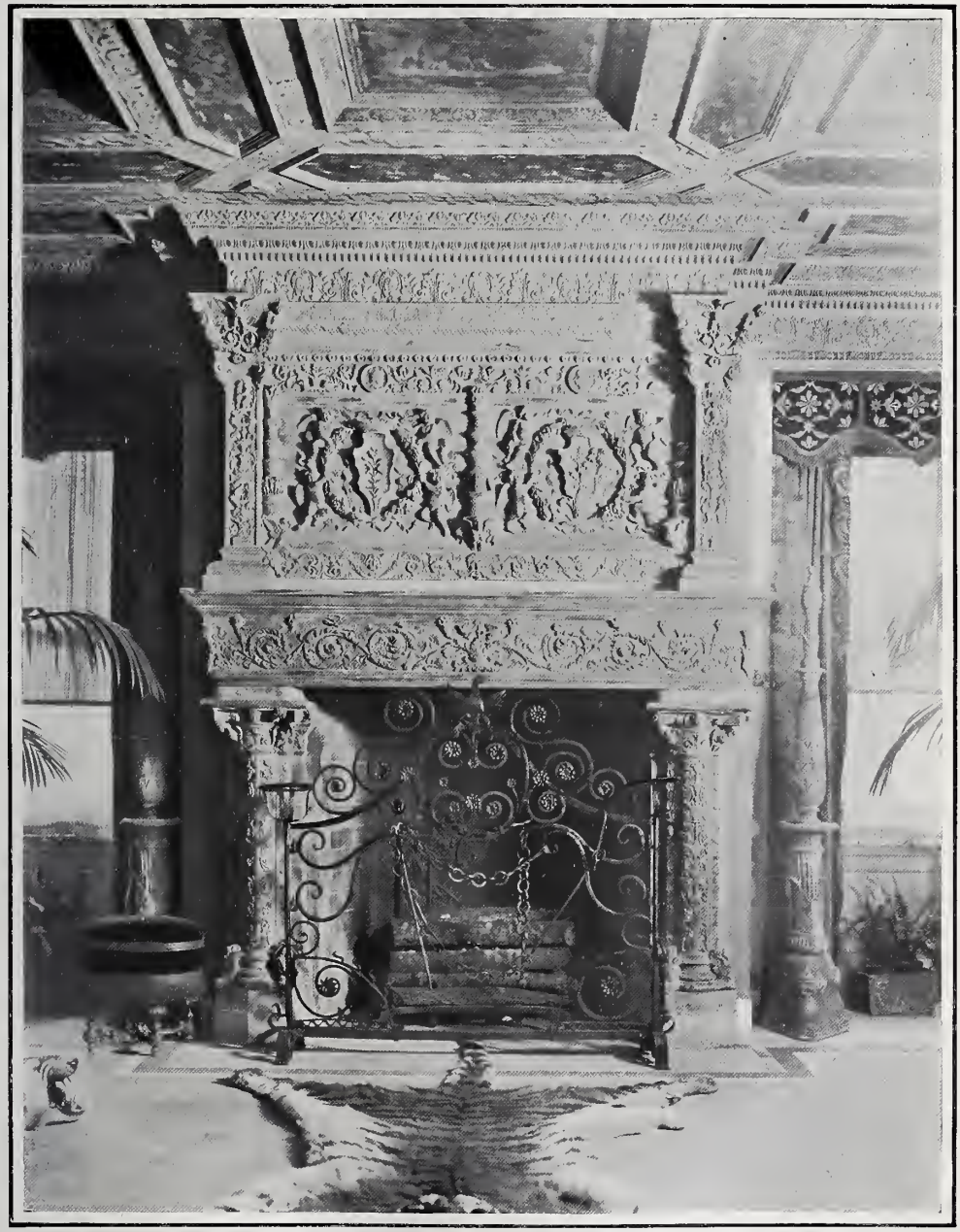
THE CONSERVATORY LEADING OFF THE DINING ROOM.

House of Mr. Henry W. Poor. Architects, McKim, Mead & White.

DOORWAY LEADING FROM THE DINING ROOM.

House of Mr. Henry W. Poor. Architects, McKim, Mead & Whit .

House of Mr. Henry W. Poor. HALLWAY, SECOND FLOOR. Architects, McKim, Mead & White.

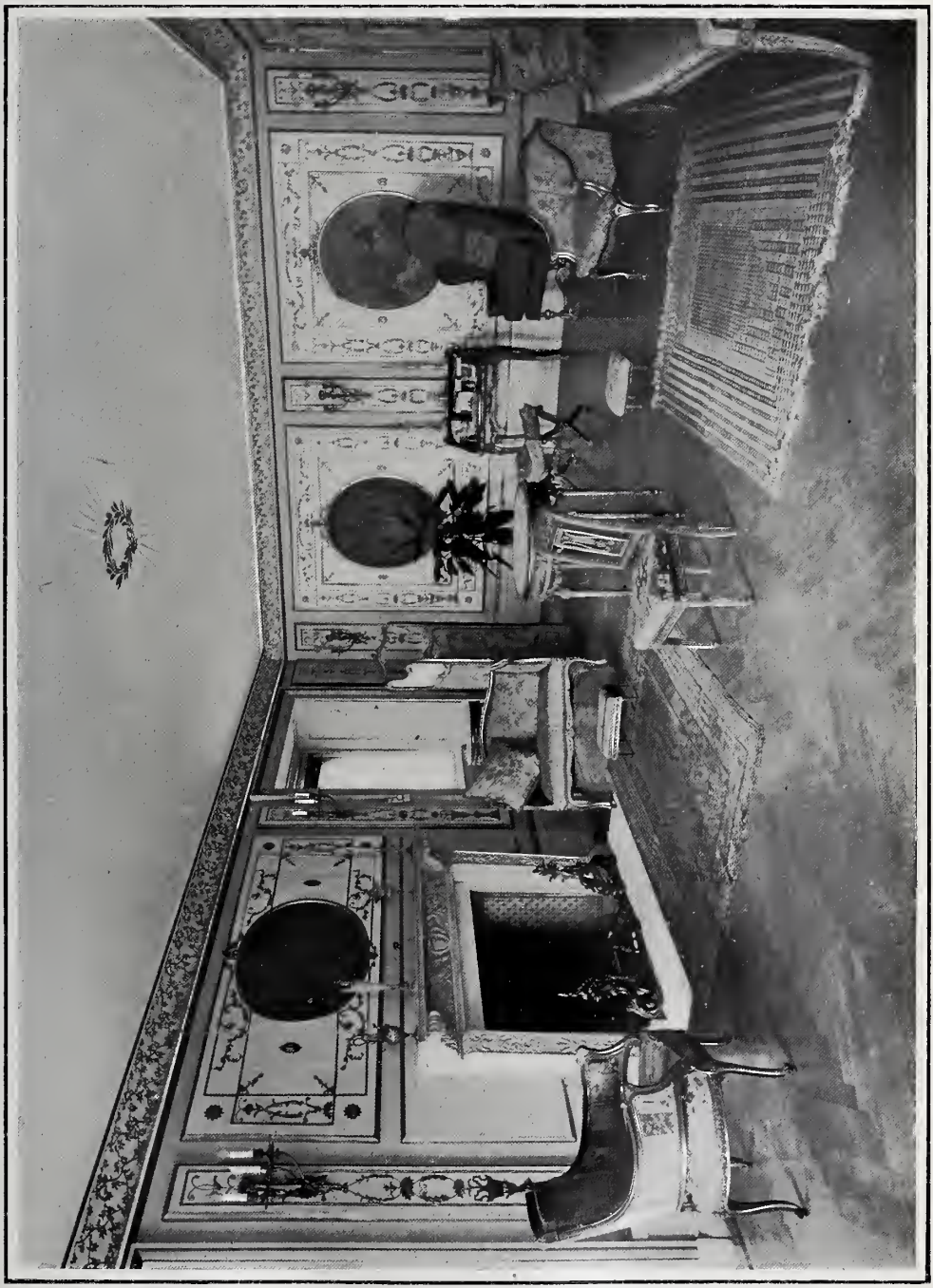


MANTELPIECE IN THE HALLWAY ON THE SECOND FLOOR.

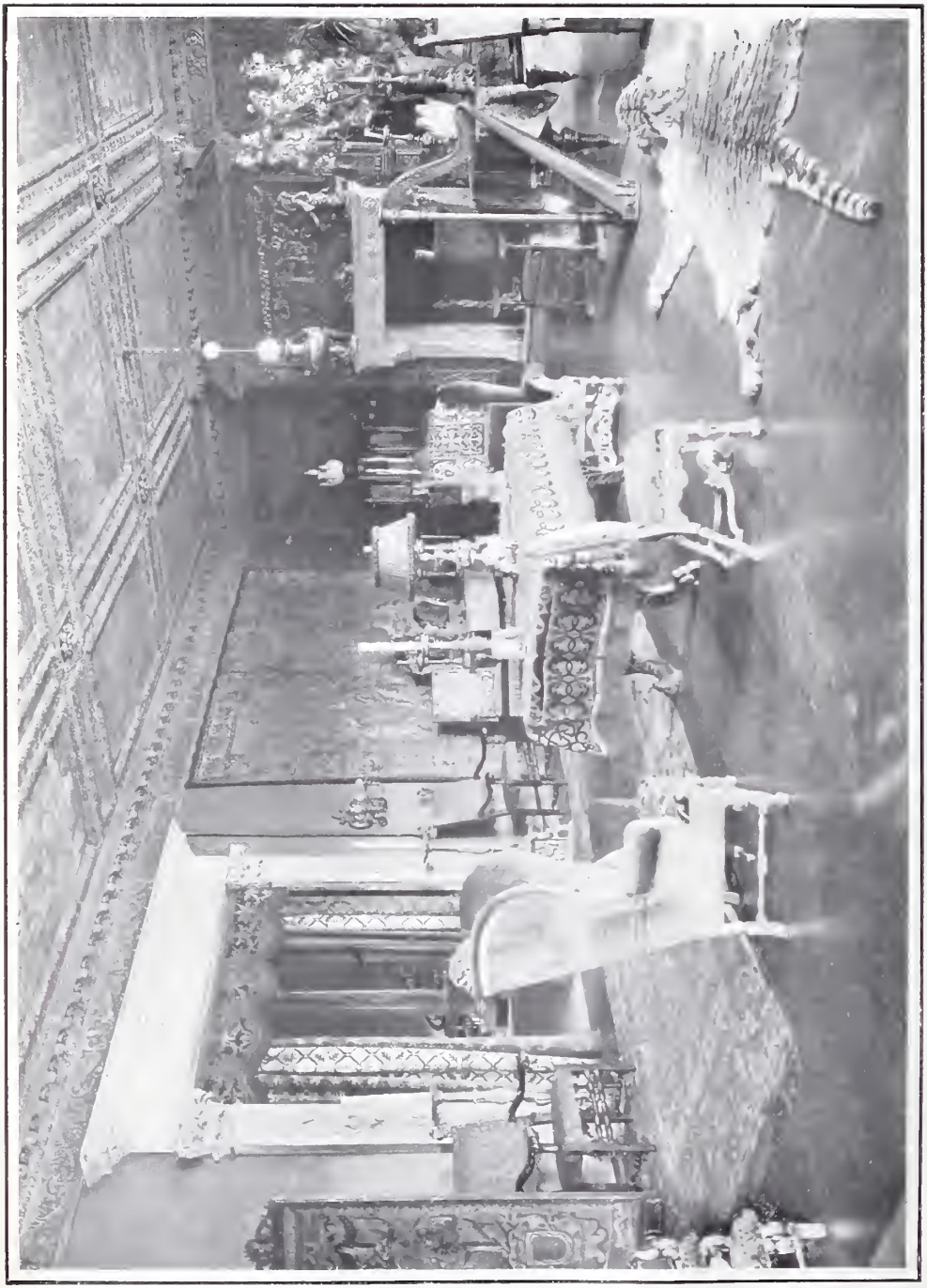
House of Mr. Henry W. Poor. Architects, McKim, Mead & White.

HALLWAY ON THE SECOND FLOOR—ANOTHER VIEW.

House of Mr. Henry W. Poor. Architects, McKim, Mead & White.



House of Mr. Henry W. Poor. A SITTING ROOM. Architects, McKim, Mead & White.



House of Mr. Henry W. Poor. THE DRAWING ROOM. Architects, McKim, Mead & White.

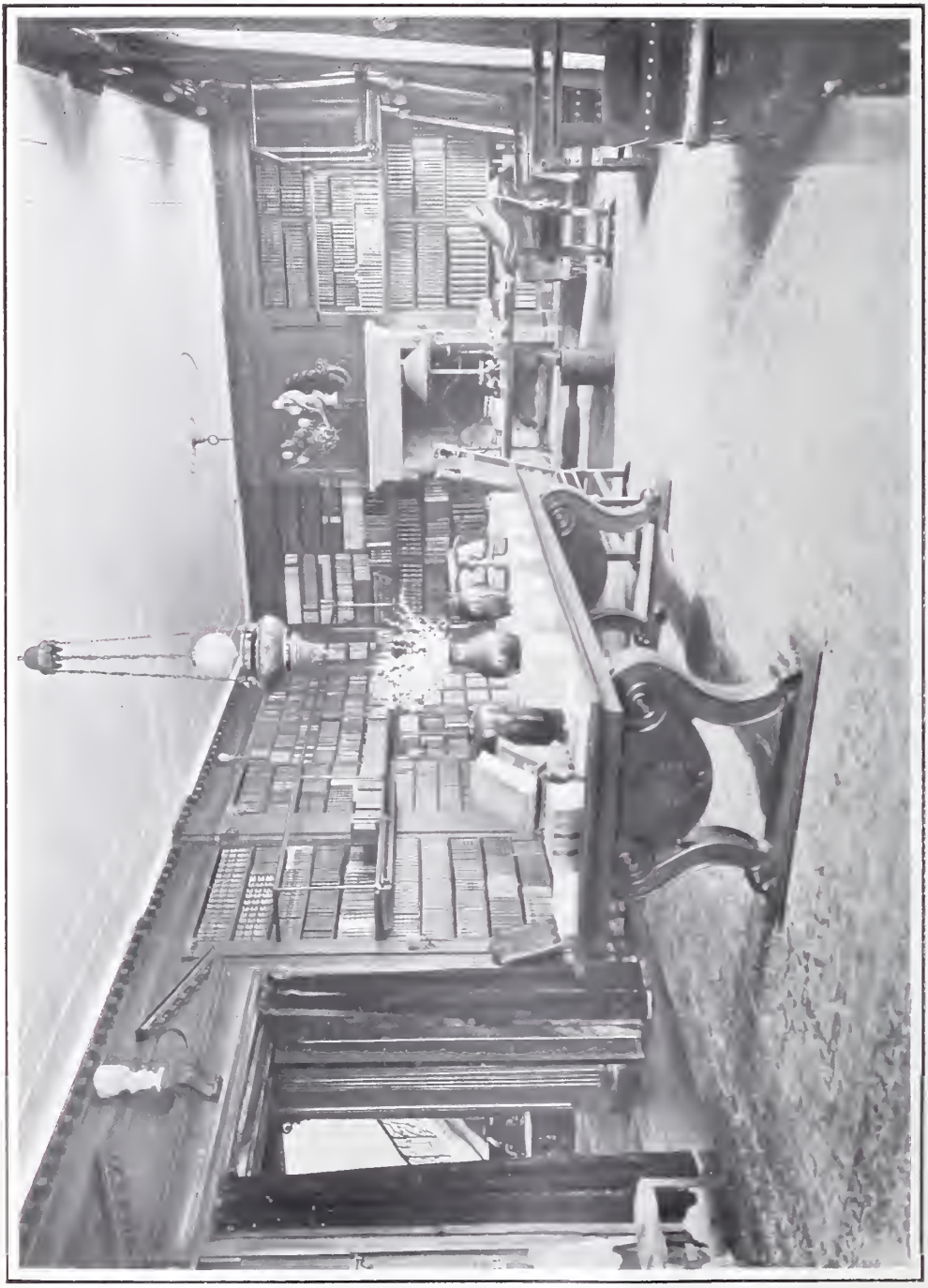
House of Mr. Henry W. Poor. CONSERVATORY OFF THE DRAWING ROOM. Architects, McKim, Mead & White.

MANTELPIECE IN THE DRAWING ROOM.

House of Mr. Henry W. Poor. Architects, McKim, Mead & White.

MANTELPIECE IN THE DRAWING ROOM.

House of Mr. Henry W. Poor. Architects, McKim, Mead & White.



House of Mr. Henry W. Poor. THE LIBRARY. Architects, McKim, Mead & White.

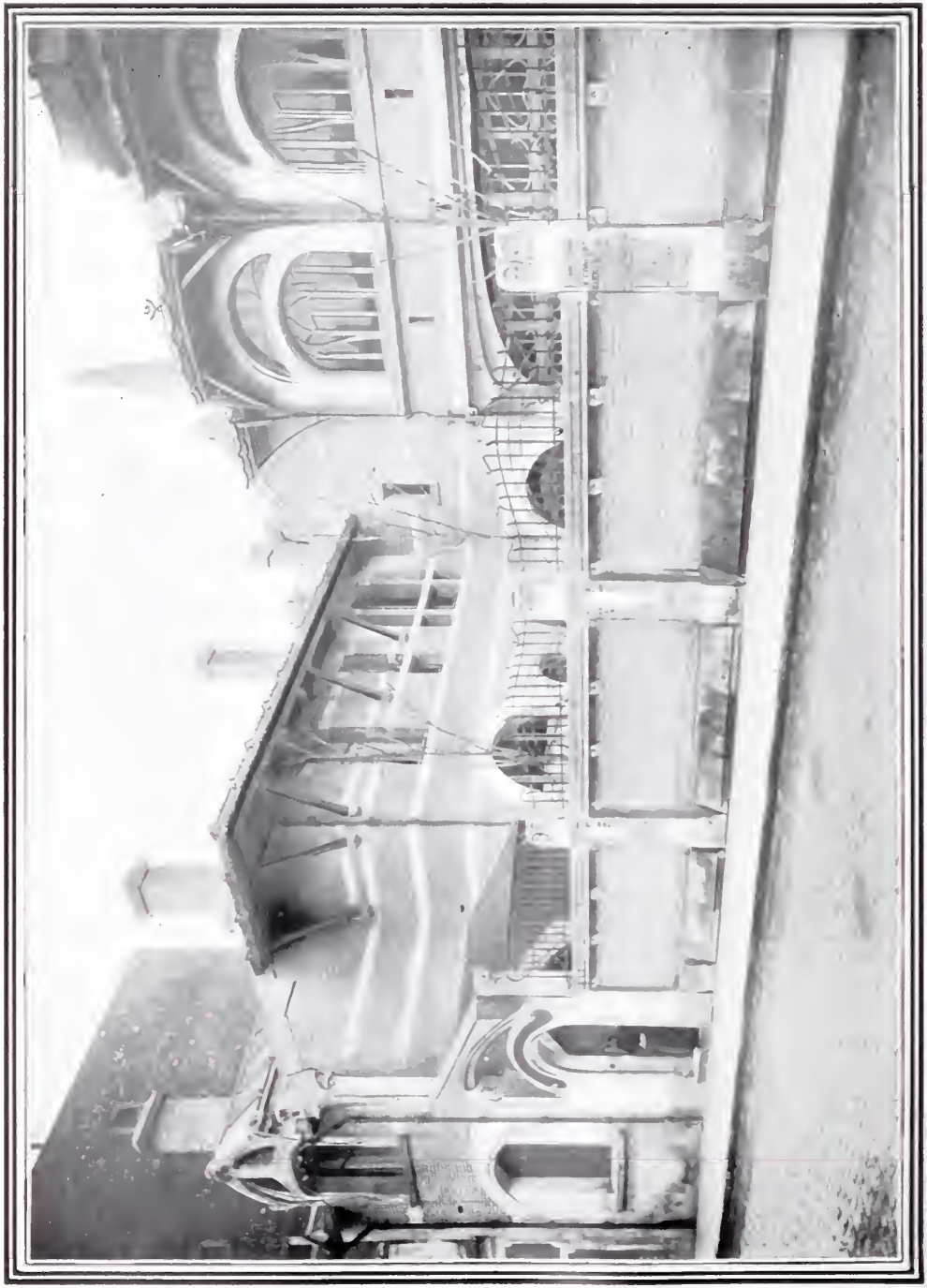
MANTELPIECE IN THE LIBRARY.

House of Mr. Henry W. Poor. Architects, McKim, Mead & White.

STATION, METROPOLITAN RAILROAD IN PARIS. Architect, M. Hector Guimard.

L'ART NOUVEAU.

IN view of the interest now existing in the so-called "new art," the Architectural Record proposes to publish a number of articles illustrating the recent architectural, sculptural, decorative and metallic work which goes by that name. The description of the Humbert de Romans Building, contained in this issue, is the first of these articles, and it will be followed by others paying particular attention to furniture, jewelry and other similar subjects.



THE HUMBERT DE ROMANS BUILDING FROM THE RUE ST. DIDIER.

AN "ART NOUVEAU" EDIFICE IN PARIS.

The Humbert De Romans Building.

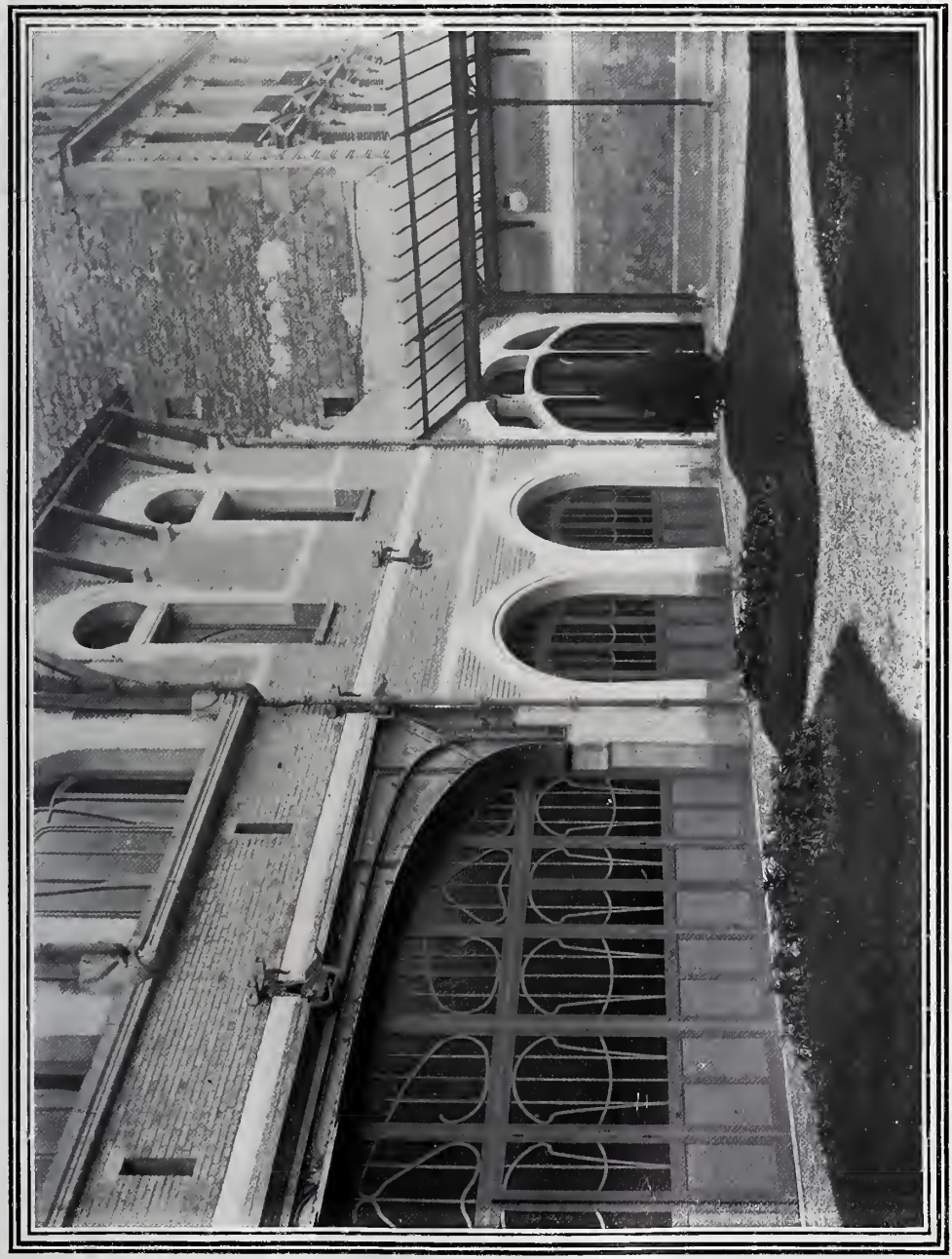
Hector Guimard, Architect.

THE Parisian who, starting from the Bois de Boulogne or from the Place de l'Etoile, walks along the Avenue Victor Hugo and turns into the rue St. Didier, sees on his left an edifice of very noval aspect. In front, fenced off from the street by an ornamental railing of light construction, there is a courtyard, partly covered; and on the left of this courtyard, a building of a character hard to define, but which gives one the idea of a chapel whose distinctive signs are hidden by details thoroughly modern in style. Behind the courtyard and chapel stands a spacious hall, the dome of which dominates all the rest. The hall is fitted up for concerts. Everyone who passes in front of this edifice asks himself: "Whatever can this be? What is this mixture of things so dissimilar—a courtyard, a chapel and a concert hall?" What it has been intended to build at No. 60 rue Saint-Didier is an edifice of a special kind, comprising two things, viz.: a public hall and a *patronage*. A *patronage* is a sort of school where the children and young people who attend it are taught morality and religion.

This edifice is called the "Ecole Humbert de Romans," after an ancient monk, known by his writings on religious art, and particularly on sacred music. It is also a monk, the Père Lavy, belonging to the Dominican order, who is the originator of this edifice. His idea was that it should be a school of divine art—a sort of religious and popular *Conservatoire*. Thanks to his great influence among wealthy people in Paris, the Père Lavy succeeded in collecting about $200,000 for the erection of his Academy. Scarcely was the building finished, however, when, for reasons which it would take too long to give here, the Père Lavy found himself suddenly banished by episcopal order, and therefore obliged to abandon his famous religious *Conservatoire*, before it had even been inaugurated, and leave it in the hands of laymen. The large hall will be used for concerts—religious and secular. As to the *patronage*, which was to have been occupied by the Père Lavy, it will doubtless serve as a residence for some impresario, or perchance for a poet or a painter, having a taste for a dwelling of an original kind. This, however, is a point which concerns us but little. What interests us is the structure itself, the architect of which is M. Hector Guimard, who came into prominence as an exponent of the new architecture when he designed the stations of the Paris Metropolitan Railroad.

The edifice in the rue Saint-Didier had to comprise a concert hall capable of holding from 1,500 to 2,000 persons. It had to have a gallery. On one side there was to be a stage, with a grand organ at the back of it. Besides the hall itself, there was to be the necessary subsidiary buildings, such as the cloakrooms, lavatories, vestibules and so forth. The establishment also had to have a janitor's lodge, a chapel 27 metres long by 8 metres in width for the accommodation of the Père Lavy, and a *patronage* communicating directly with the hall. M. Guimard, who had at his disposal a rectangular piece of ground, has combined the various parts of the edifice in a most judicious manner, showing a thorough knowledge of modern needs. A glance at the various photographs we reproduce will suffice to show that the architecture, both external and internal, is in the modern style, and we know that this style has at least one drawback—that of being very costly, all the materials employed having to be wrought according to special drawings.

We have said that the principal façade is on the rue Saint-Didier. In front of its central part, however, there is a fairly spacious courtyard, separated from the street by an ornamental iron railing seven feet high. Entering by the doorway on the right, one first reaches an outer vestibule, in which there is a vestiary, fitted up in such a manner that the garments, instead of being piled up pell-mell, as is generally done, are hung upon pegs, which allows of their being easily returned to the owners without any hustling. Two other



THE COURT YARD.

THE VESTIARY.

A DOORWAY.

vestibules lead out of this first one, and the effect is that the hall has wide exits on three of its sides. These vestibules all have a floor in pink imitation marble with a pattern of lilies and golden nenuphars. They are built of stone, iron and cement, like all the lower part of the edifice, and thus are practically fireproof. They communicate with the hall by a continuous row of doors, which arrangement is very convenient and constitutes, moreover, a safeguard in case of fire.

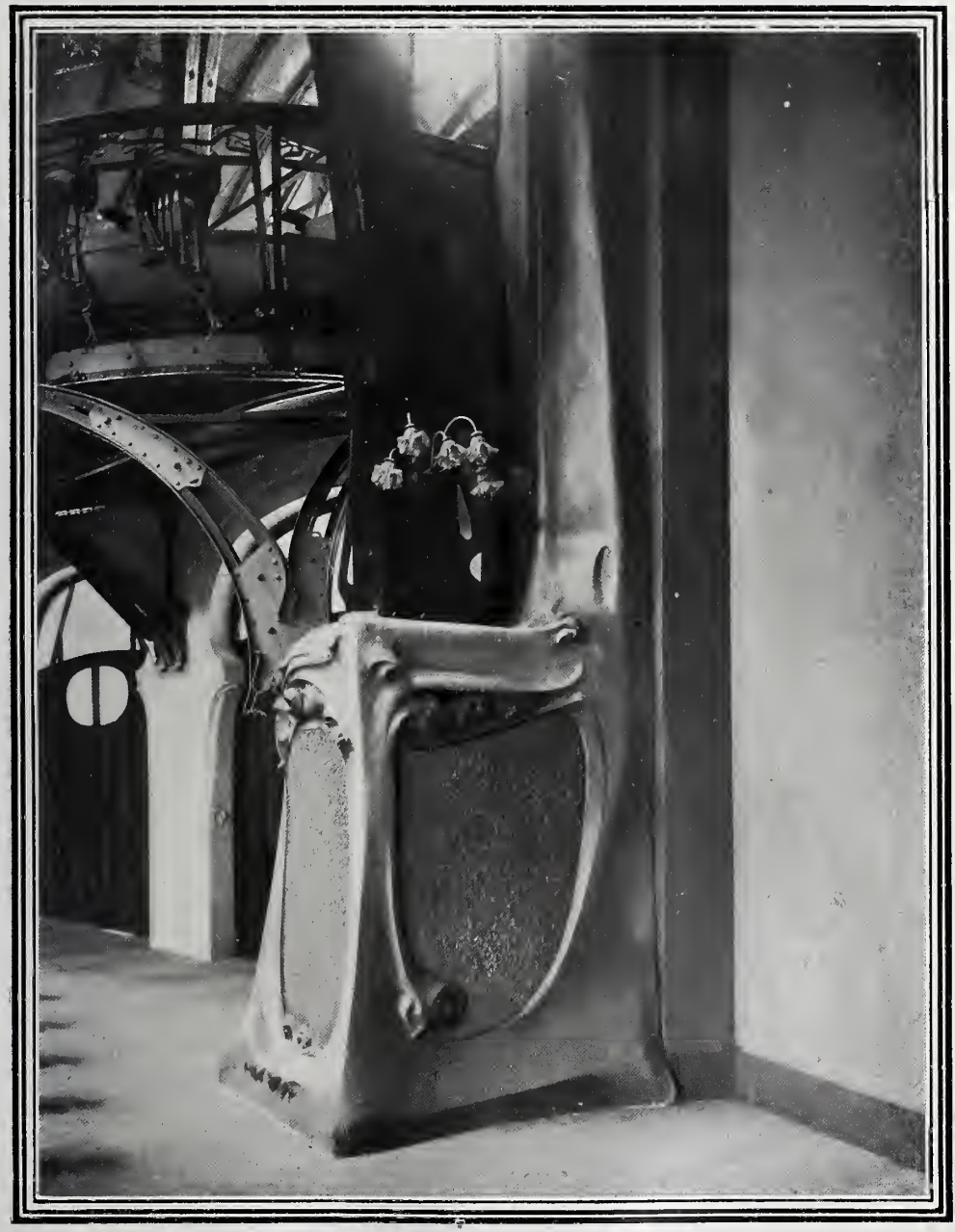
The hall is 29 yards long and 25 in width. It is formed of a visible structure, springing from the ground at each corner and spreading in graceful curves like the branches of an immense tree, in a way which gives one somewhat the idea of a corner of a druidic forest. The main branches, eight in number, support a rather high cupola, pierced, like the sides, with bays filled with pale yellow stained-glass, through which an abundance of light finds its way into the hall. The framework is of steel, but the metal is covered with mahogany in all visible places. What is in reality only a thin strip of steel thus has the appearance of a thick beam. The pillars, for example, measure as much as 20 inches by 15 at the foot and 11½ inches at the top. The principal rafters also measure 11½ inches each way, and the principal tie-beams begin with 15½ inches and finish with 10 inches on each face. Nevertheless, the tie-beam being 35 feet long has a light and elegant appearance, owing to the great distance between the supporting points. Three hundred cubic meters of mahogany were used for the framework, and the result is the most elaborate roof ever conceived by a French architect. The mahogany is polished, it has a warm red color, and stands out from the voussoirs of the ceiling, which are painted orange color, shaded gradually lighter in the direction of the spectators, producing a very happy effect. These voussoirs, between the rafters, are in plaster, decorated with antique masks and with trumpeters in the corners. A part of the ornamentation has been done in sheet iron and forged iron platbands, which soften the angles and connect the various parts with one another. To the arched buttresses electric lamps are fixed in groups of twelve, having the appearance of branches of strange fruit on foliations of iron.

At the bottom of the hall there is a platform or stage and a fine organ with 44 stops, built by Abbey. The case of the instrument is of mahogany, in the same style as the hall. This organ was built according to the ideas of the celebrated composer Camille Saint-Saens. It has three keyboards, and is fitted with every modern improvement. The stage is large enough to hold 100 musicians and 120 choristers.

The hall contains 1,150 numbered seats, but there is so much

A VESTIBULE.

DOORWAY LEADING FROM THE HALL.

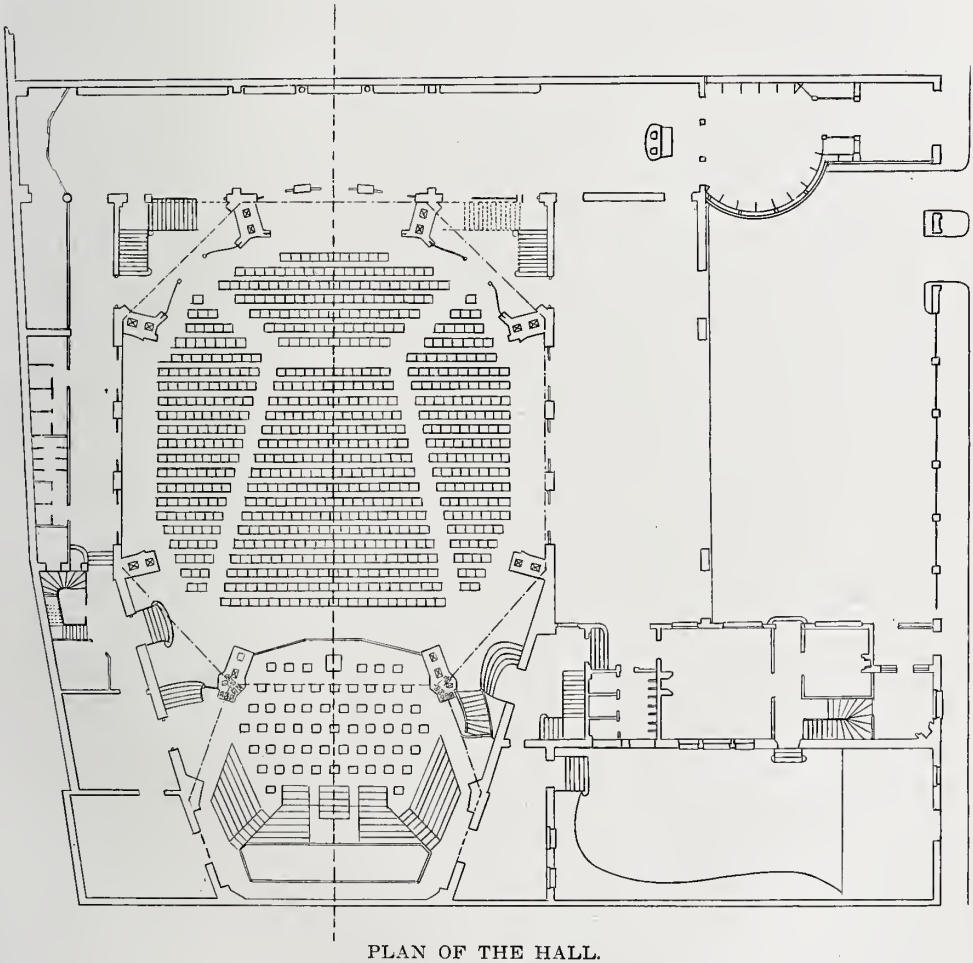


BASE OF THE IRON FRAME WORK.

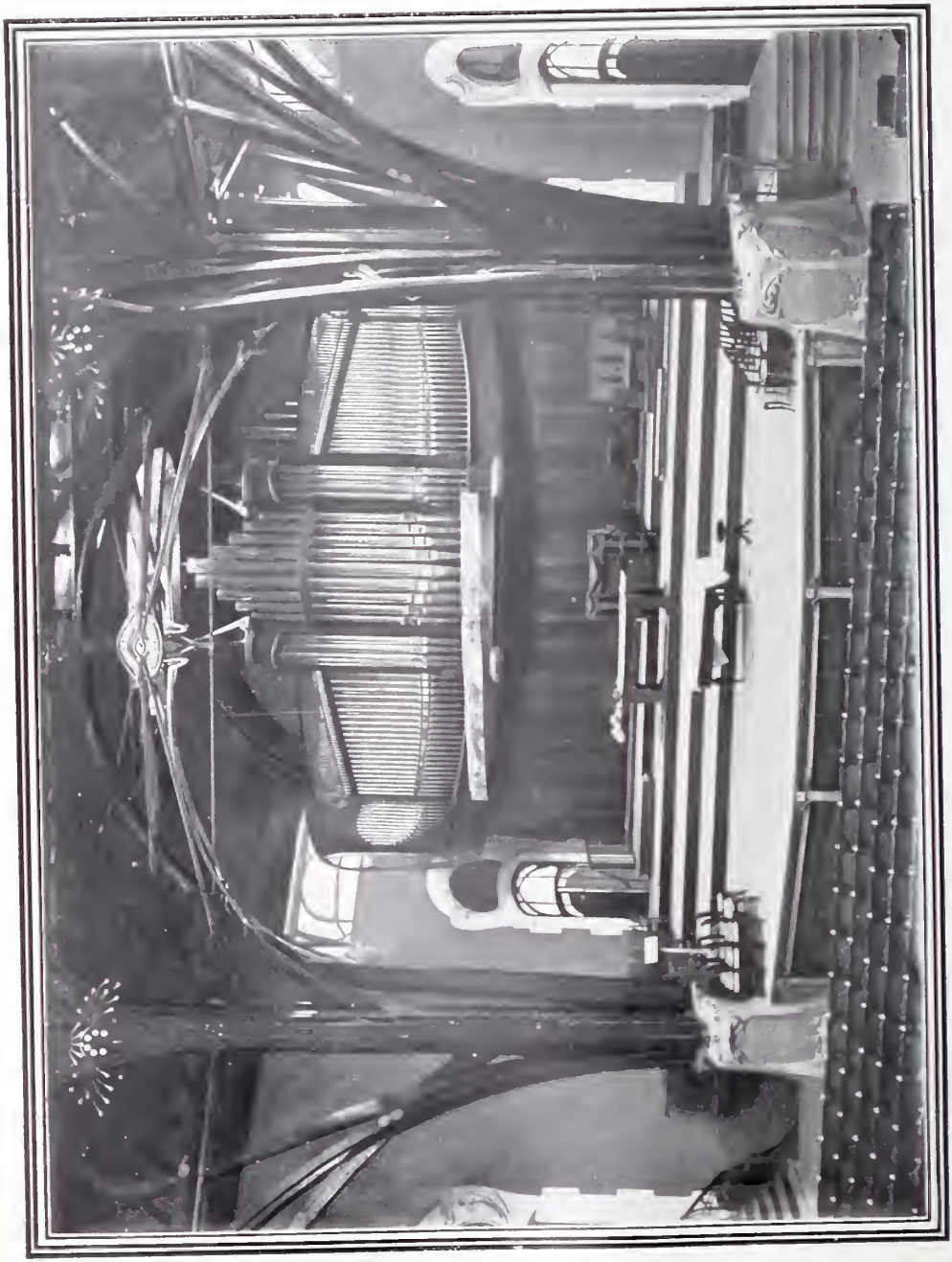
occupied space that an audience of 1,500 or 1,600 could easily be accommodated. The armchairs are roomy, with plenty of space between each row, and they are placed quincunx-wise, in order that everybody may have a clear view of the stage. These chairs have a light cast-iron frame in the form of branches; the seat is of green leather, stamped with curves and volutes. These chairs are simply fastened down by four screws to sockets of artistic design, they can therefore be dismounted and removed with little trouble. This arrangement is necessary, as the hall is intended to be used occasionally for charity bazaars, art expositions, etc. For the same reason the floor of the hall is but slightly inclined. The floor of the large vestibule is covered with ceramic tiles decorated in an amusing way with curves and twines. The system of heating employed is that of hot water, which is supplied by two boilers placed in the basement. Two staircases of the most simple design lead to the upper floor, which is provided with armchairs similar to those in the hall below. On the left there is a spacious room suitable for use as a lobby or as a promenade. The balcony of this floor is in iron, and it is decorated, like the balustrades of the two staircases, with lyres and musical notes. Although, as a work of art, this balcony is somewhat weak, its effect is decidedly pleasing.

The general impression produced upon one by this novel concert hall is very favorable. M. Guimard deserves praise for designing it, and he is further to be complimented upon the practical way in which it is arranged and fitted up, in spite of what a few critics may say to the contrary. Although M. Guimard's style is puzzling at times, he shows a grasp as rare as it is meritorious of the necessities of the present day. He is eminently rational, and possesses *verve* and logic.

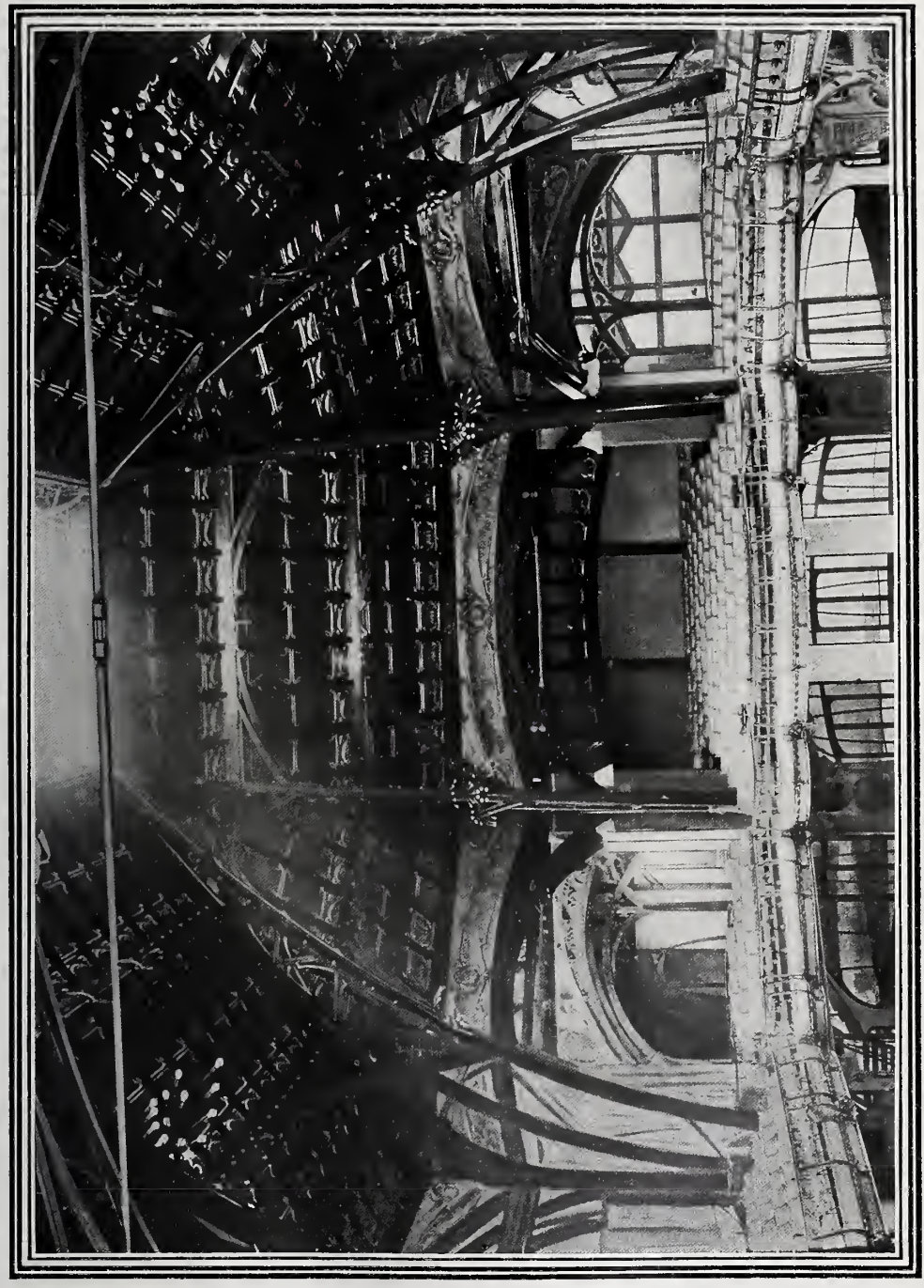
In every part of this Humbert de Romans Hall there is plenty of air and ample room to move about, and the comfort of visitors has been carefully studied. The closets, situated along the whole of the side of the right hand vestibule, are commodious and numerous. Last, but not least, the acoustic properties of this concert hall are excellent. It vibrates extremely well, and has no annoying echo. It is an ideal hall for stringed instruments and for the voice. It vibrates almost too much for brass instruments, which have to be moderated. M. Camille Saint-Saens gave some valuable hints in this connection, and it was upon his advice that M. Guimard, in order to obtain the requisite sonorousness, planned a proper distance between the ceiling and the roof of the hall, so that they should have a cushion of air between them. The exterior of the edifice is built of freestone, with certain parts in millstone, brick and iron. The sculpturing, which is interesting here and there by reason of its fanciful treatment, has been done from



PLAN OF THE HALL.



THE STAGE OF THE HALL.



BALCONY OF THE HALL, SHOWING THE FRAME WORK OF THE ROOF.

models composed by M. Guimard himself, who also designed all the ornamental tiles. The locksmith's work was entrusted to M. Balet, and he has executed it with a conscientiousness deserving of the highest praise.

We need not describe in detail the left wing of the building, in which the Père Lavy and the *Patronage* were to have been quartered; this wing has now no particular purpose. We will simply say that the entrance, surmounted by a large and elegant bay, is picturesque, and that it leads to a ground floor, which is mainly composed of a large garden, a billiard room and a small chapel, the last-named being ornamented with a cross of charming and very original design.

Fernand Mazade.

MODERN ART (L'ART NOUVEAU) IN JEWELRY.

IN no domain has modern art brought about such considerable and such excellent changes as in the jewelers' art. There has been not only a transformation of decoration, as in furniture for instance, but a revolution in the very condition of a piece of jewelry. Think what jewelry was during the nineteenth century, of which it is amusing to speak in the past tense, and what it so often is to-day. Purely and simply precious stones. The manner in which they were grouped and set was of less importance than were the stones themselves. We believed that it sufficed to possess a stone of fine water and that it constituted in itself a beautiful piece of jewelry. Who thought even to look at the setting of a necklace of pearls, each pearl being worth a thousand dollars. This was the conception of a rich but inartistic piece of jewelry.

Modern art is leading a crusade against this false and narrow idea. Art is invading the domain of feminine attire and it says, "you may be rich, but you must be artistic." The consequences of the revolution have been great. The setting, the manner in which the stones are grouped, has become of even more importance than the stones themselves. Moreover a quantity of stones, charming in themselves, but not rich enough for the costly piece of jewelry, have consequently come into fashion again. The admirable opals, which nothing can replace, amethysts, turquoises, aiguemarines, beryl, chalcédoine and garnets of different hues have offered to the artist a scale of color, infinitely varied for his creations. The taste and the choice of the artist are now preponderant. A rich stone may be set in bad taste, a simple jewel may be exquisitely artistic. This fact was not dreamed of a few years ago. To the commercial value of the stones, which remains the same, has been added the infinitely variable value of an object of art.

The originator of this transformation in jewels, in France and, if I am not mistaken, in the whole world, is Mr. Lalique, whose beautiful models are now familiar to all and have for the greater part, been exhibited in the salons of painting and sculpture in Paris. Who would have believed that jewelry would be received in the salons, and would rank among pictures and statues? The reader must know that the same artistic conception of jewelry existed

MODERN ART (L'ART NOUVEAU) IN JEWELRY.

MODERN ART (L'ART NOUVEAU) IN JEWELRY.

during the middle ages. But a comparison between the productions of that period and ours, would carry us too far.

We have gathered together here, a series of jewels which have come from the work-room of the "Art Nouveau," the house directed by Mr. Bing. We can judge only of the diversity of forms, and imagination must do the rest. Some of the ornaments assume quite geometrical forms, or scrolls which remind us of the Byzantine styles. Here on the contrary we see delightfully graceful flowers, sumptuous orchids, very like nature, and there ornaments of charming lightness, beside heavy buckles. Everywhere the forms and designs are the work of an artist, everywhere art is evident, and things of real beauty are being created, although it should be added that of course some pieces are less successful than others.

This is of little importance, however. The essential thing is that work is being done, taste purified, and that we witness more and more perfect realizations of the artists' fancies. The most varied artistic temperaments find a way of expressing themselves, in this new field of art. Modern jewelry has been born. Its life will be a long one.

Jean Schopfer.

NOTE.—As color plays an all-important part in the appearance of these articles of jewelry, we add a description of each piece illustrated in the two foregoing pages. Beginning in the upper left-hand corner of page 68 is a belt buckle, consisting of gilded silver and pearls, designed by Colonna, while immediately to the right are two others, by the same artist, the upper one consisting of gilded silver, with a pearl for the central stone, and white enamel on the flower petals. In the upper right-hand corner of the same page is a pearl pendant, designed by Colonna, with a gold setting. The brooches on the second row to the left are made of gold and pearls. The chain to the right is gold, the flowers consisting of red enamel in the center, and transparent green on the outside. The pendant is enameled in green, with a pearl stone. The other pendant on the same row is gold entirely, enameled in green and set with pearls. The pendant in the lower left-hand corner is made of gold, with green enamel on the two leaves and a pearl. In the middle is a clasp of gold with pink enamel on the exterior, and green in the motive framing the pearls. Immediately below is a gold bracelet, and in the lower right-hand corner a silver sugar spoon gilded, with the end of the handle sculptured coral.

In the upper left-hand corner is a turquoise pendant, of gold, dull white enamel, with transparent brown enamel motives. The piece in the middle consists of gold, green enamel, pearls and diamonds, and the one in the upper corner of gold and a pearl, as does the piece immediately below it. In the lower right-hand corner is a plaque for a neck ribbon, made of three emeralds, pearls and diamonds, white enamel with blue enamel in the central motives framing the emeralds. All these articles were designed by Colonna.

A VILLA IN CAPRI.

FOR an artist what life could offer more attractions than to dwell on Capri, and have before his eyes the panorama of that view in hemicycle from the cliffs of Amalfi round by Sorrento and Naples, to the stricken isle of Ischia? Always as a center point to which the eyes return is the cone of Vesuvius, gracious and yet mysterious, with its plume of cloud by day, with its plume of fire by night. Here to dwell is to watch the changing colors of the Mediterranean under different light and varying winds, from a blue so intense and striking where the cliffs of the island bathe their feet in the waves that one can scarcely believe the water is not dyed with some coloring matter, to a flat gray that gives the sea the appearance of a hard, smooth limestone pavement. No wonder Capri is the resort of painters from all countries.

This fortunate life Charles Caryl Coleman has led these many years. Nor does he show any abatement of his love for Capri. Every year or two he brings home the spoils of his successive campaigns about the little land, in the shape of views of the bay of Naples, "Songs of Vesuvius," in pastel or watercolor, moonlight scenes with figures supplied by the handsome race of Capri folk, religious canvasses adapted to the decoration of altars, graceful views of old Capri gardens to-day, and imaginary scenes from Capri life when the Roman emperors had their villas on the island. But what makes him more of a Capresi than the other painters is the fact that he has builded him in Capri a house, the several points of which may be better seen from the illustrations than told in words.

To build a villa on Capri after his own ideas, to decorate with his own designs, and to fill it with the antiques picked up in a lifetime passed in Italy, that is indeed a bit of fortune which falls to few artists. Whilst occupying another house as a studio Mr. Coleman discovered on the high, one may well say the lofty, street looking over a wall down, down into the ravine at whose foot lies

FIG. 1. THE ALLEY ON THE EXTERIOR OF VILLA NARCISSUS.

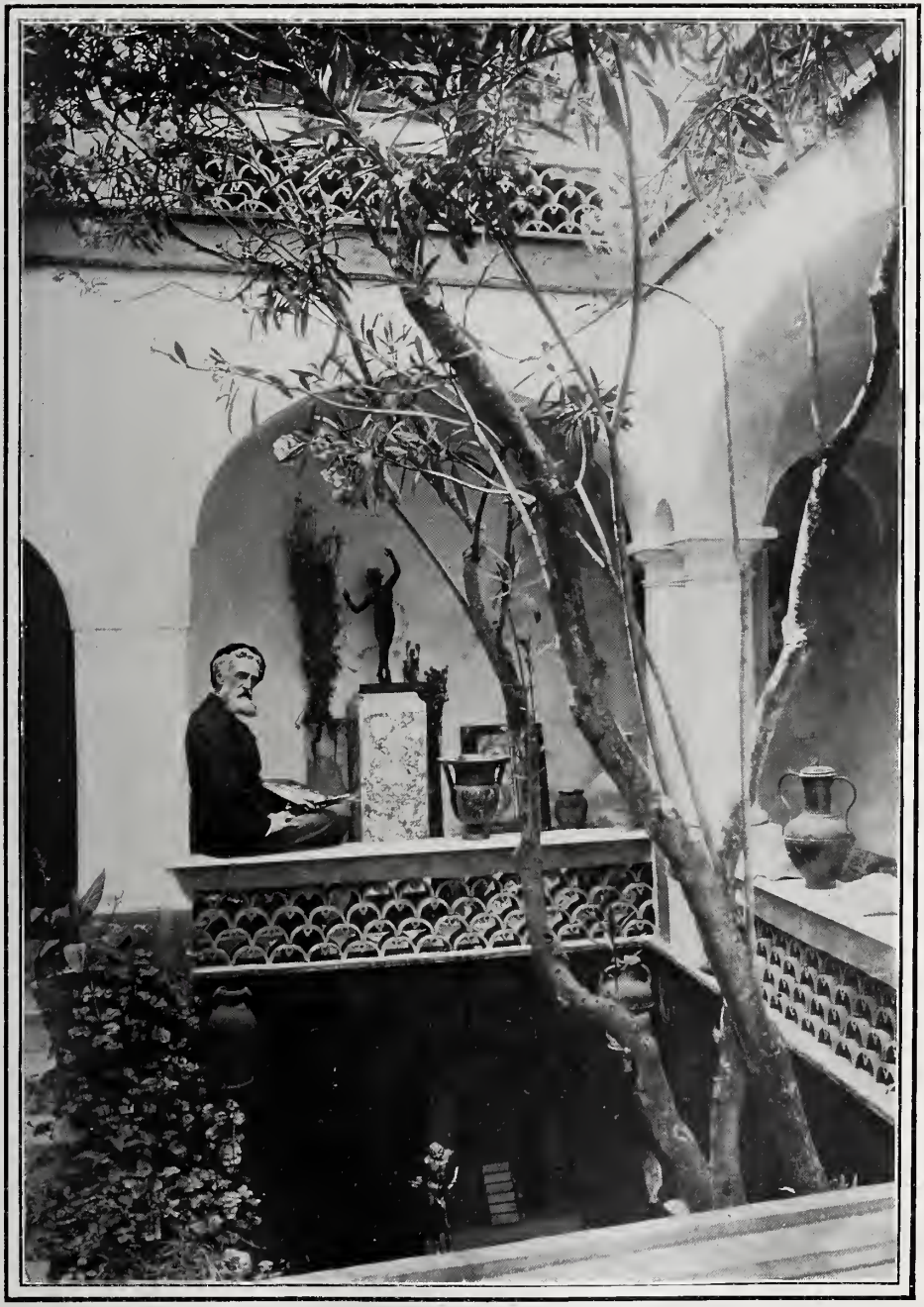


FIG. 2. "THE COURTYARD WHERE THE OLEANDER GROWS."
The artist seated on the parapet is Mr. Charles Caryl Coleman.

the chief harbor, he discovered on this street an old convent with adjoining guest-house, the latter separated from convent and church by a narrow alleyway. On this guest-house he kept his eyes and when the moment came he bought it, and from the house of Christian women it became the house of a pagan man. At least he dubbed it Villa Narcissus after a very pagan deity, and dedicated it to art.

An ancient oleander growing from one of the courtyards which shows its flowers and leaves above the roof beckoned the painter to this spot; and a visit to the roof revealed the splendid view. Standing there, the plateau of Anacapri with its gray cliffs is seen across the saddle of the island and beckons one to bolder views of the Mediterranean. Directly in front is the wide stretch of Naples Bay, with Ischia to the left and remote Baiae afar. Past the lofty eastern end of the island, where Tiberius built the Villa Jovis and lived in savage seclusion, where he is said to have pushed bores and suspected persons from the precipice, one sees spread out the whole of Naples Bay—Sorrento, Castellamare, Vesuvius, Portici and Naples. The outlook is charming, yet the villa nestles cozily enough among the houses of the town, and all about it in the nearer view are semi-Oriental housetops and gardens and vineyards, clumps of trees and walled roads that zigzag up from the harbor, not to speak of the picturesque limestone rock formations which girdle Capri round with slender, fantastic towers of stone.

In building Villa Narcissus the artist had to follow the lines of the existing structure; but the nuns would never know their home again, should they rise from the little churchyard or stalk forth from the grim house where they lie in their convent garb. Roughly speaking, the first courtyard is Pompeiian, the second Moorish. At times Capri has been held by Carthaginian and Moor, as well as by Greek, Roman, Vandal, Saracen and Spaniard; so that no violation is done to the historical unities.

From the vestibule one sees to the left the marble stairs whose walls are incrusted with bits of carving belonging to old Roman times, and in front the courtyard where the oleander grows, a yard that recalls impluvium of a Pompeiian villa; for it also is open to the sky and has its pool for rain water. Just beyond beneath an arch stands a fine duplicate of the Narcissus which is the boast of the Naples Museum, and gives the villa its name.

While preparing for himself this charming abode, Mr. Coleman has had a chance to encourage arts and crafts on Capri. Thus there are doors figured in these illustrations which are designed as carefully as the grillework, and like it fabricated on the island by native workmen. The floors of vestibule and impluvium are

FIG. 3. THE BOTTOM OF THE COURTYARD, WITH THE CISTERN IN THE FLOOR, THE OLEANDER IN THE UPPER RIGHT-HAND CORNER, AND THE FIGURE OF NARCISSUS IN THE BACKGROUND.

FIG. 4. "THROUGH A WINDOW OF LIGHT STAINED GLASS ONE SEES AN OLEANDER LIFTING ITSELF UP TO THE SUNLIGHT."

FIG. 5. THE VIEW FROM THE TOP OF THE VILLA.

laid with tesselated marbles, chosen from confused heaps of old floors which were laid two thousand years ago. Balustrades and columns are built of stucco, and filled in with tiles expressly made for the Villa Narcissus. Mosaics and stained glass after Mr. Coleman's designs were entrusted for execution to Italian workmen in Capri or carried out in New York.

The charm of the Villa Narcissus lies not in its bigness, for many a villa in Pompeii is larger, but in its compactness and the pretty things that meet one at every twist and turn. Here are old wine jars, and there capitals of columns which now serve as jardinières. A spiral fluted pozzo or well-head stands before a little shrine decorated in Pompeiian fashion with inlays of glass mosaic taken from the Grotto Arsenale, relics of Roman times. Through a window of light stained glass one sees an oleander lifting itself up to the sunlight above the roofs and on the wall over the carved column of the Roman occupation which divides the double window is a mosaic. The second floor assumes the cloistered effect of a monastery on a small scale. The third floor is the roof.

There, some day, Mr. Coleman will build him the crowning piece of all, the sky-parlor and studio for which the building is, as it were, merely the approach and the underpinning. Meantime the illustration (Fig. 5) shows how the land before the villa slopes up from the Marina to the cliffs of Anacapri, where the scattered residences may be seen among vineyards and orchards, olive and fig, cypress and bay. There the road to the high plateau of the island winds away in bold straight turns. Beyond the steep on the right of the picture that plunges to the sea is the famous Blue Grotto, and nearer the little harbor are some remains of buildings in the shoal water which tradition says were the site of seabaths erected by Tiberius.

The Moorish part of the Villa Narcissus blends with little violence into the Pompeiian, as indeed Moorish architecture had its roots in Byzantine and Byzantine harks back to Rome. Mr. Coleman in his Arab dress mounts the stair that leads to an iron wicket, whose design recalls the embroideries, red or white, which come from Morocco. Here we see the arch that came to Europe after the first Crusade and may have influenced Gothic architecture. The old artist who stands before the genial householder has a right Moslem beard; it is the French painter Cain; another view of the same part of the villa reveals a latticed door beneath the charming pointed arch which repeats its graceful lines yet varies them. The crenelations above and the bands of Oriental tiles below give the touch of Moslem architecture without undue richness of coloring; they suggest Spain and Morocco.

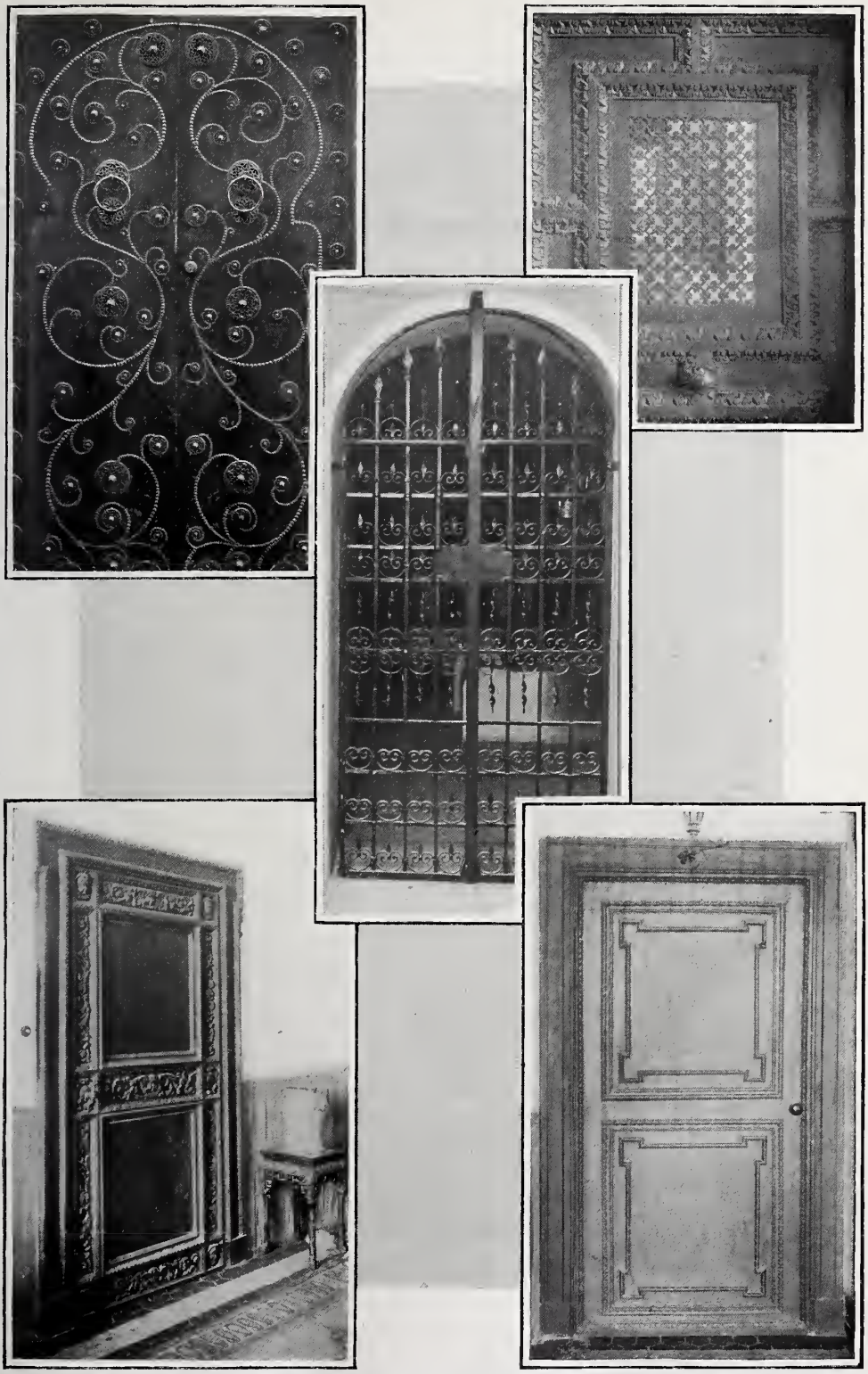


FIG. 6. DOORS AND GRILLE WORK, VILLA NARCISSUS.

The interior does not lack coziness, as we see. The details in wood are kept almost severe, while Renaissance pilasters, Oriental rugs, Persian hanging lamp and Spanish placques in brass and faiënce enrich the walls. Observe the delightful details of the doors in the smoking-room and other parts of the house which are repeated in the illustrations by themselves to show their make. Some of them are from old buildings, others new. What a labor of love to have designed all these parts and superintended their making by the artificers of the island! Here is a door of chestnut wood decorated in bronze, with a scheme of open-work rosettes, floral lines

Fig. 7. The dining room hung in 16th Century stuff. Pilasters designed after Renaissance models.

and conventionalized flowers. There is a grille of hammered iron gilded to fill a Moorish window, and yonder an iron gate to the wine cellar, with spearheads and torques and flamelets rising from spirals, the design by Coleman, the execution by Master L. Massimino of Capri. For Mr. Coleman grows his own vines and makes his own wine to fill his cellar. The olive oil he prefers is a turbid greenish liquid that would not find favor with American housekeepers, and it has a tang of its own, just as the native wines are different from the Italian wine that is exported to America. Not-

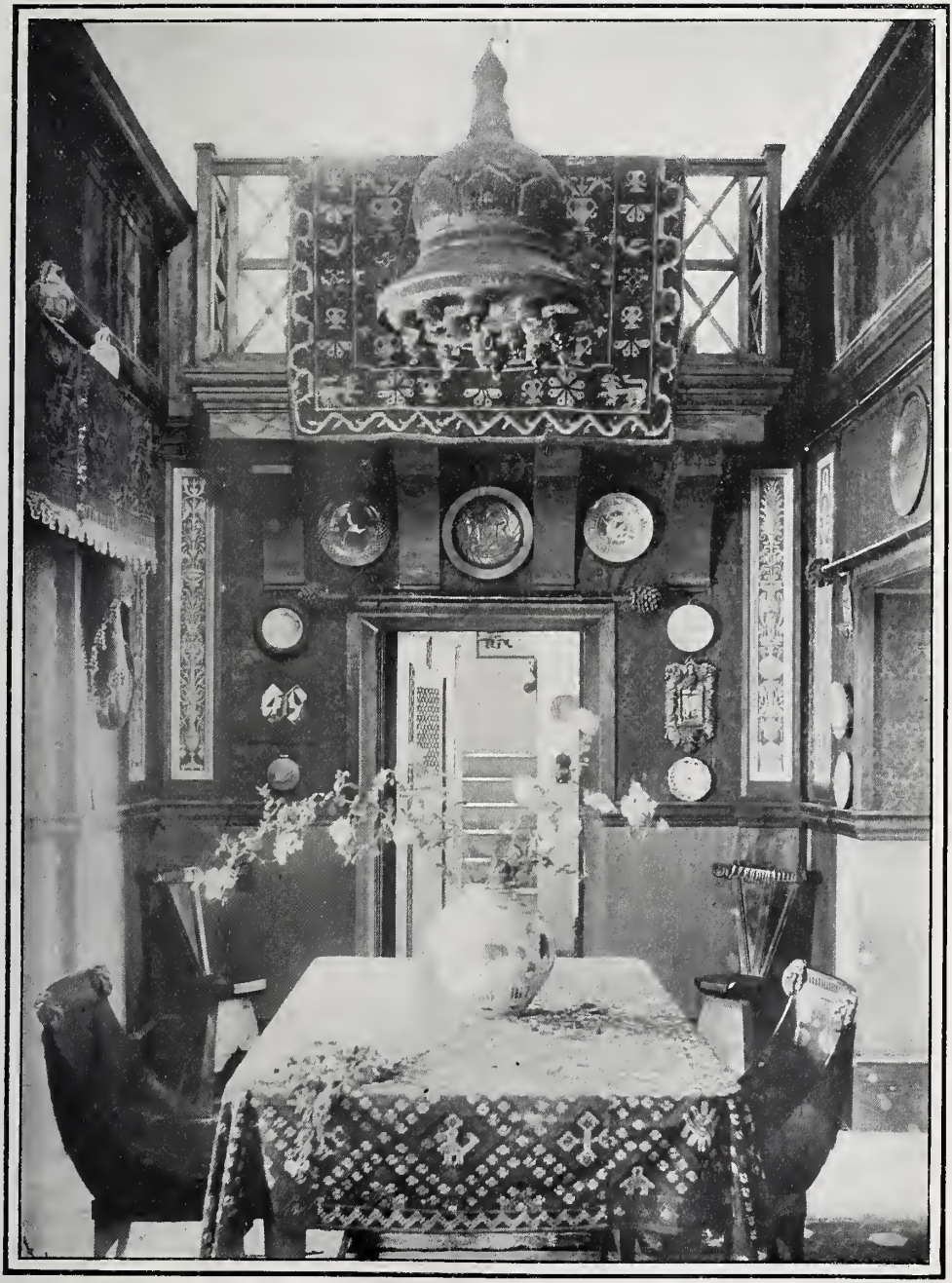


FIG. 8. DINING ROOM, VILLA NARCISSUS.

FIG. 9. DRAWING ROOM, VILLA NARCISSUS.

FIG. 10. COURT OF THE CLOISTER.

To the left is the Sea, to the right Vesuvius. A model of Gilbert's Statue of Perseus in the window.

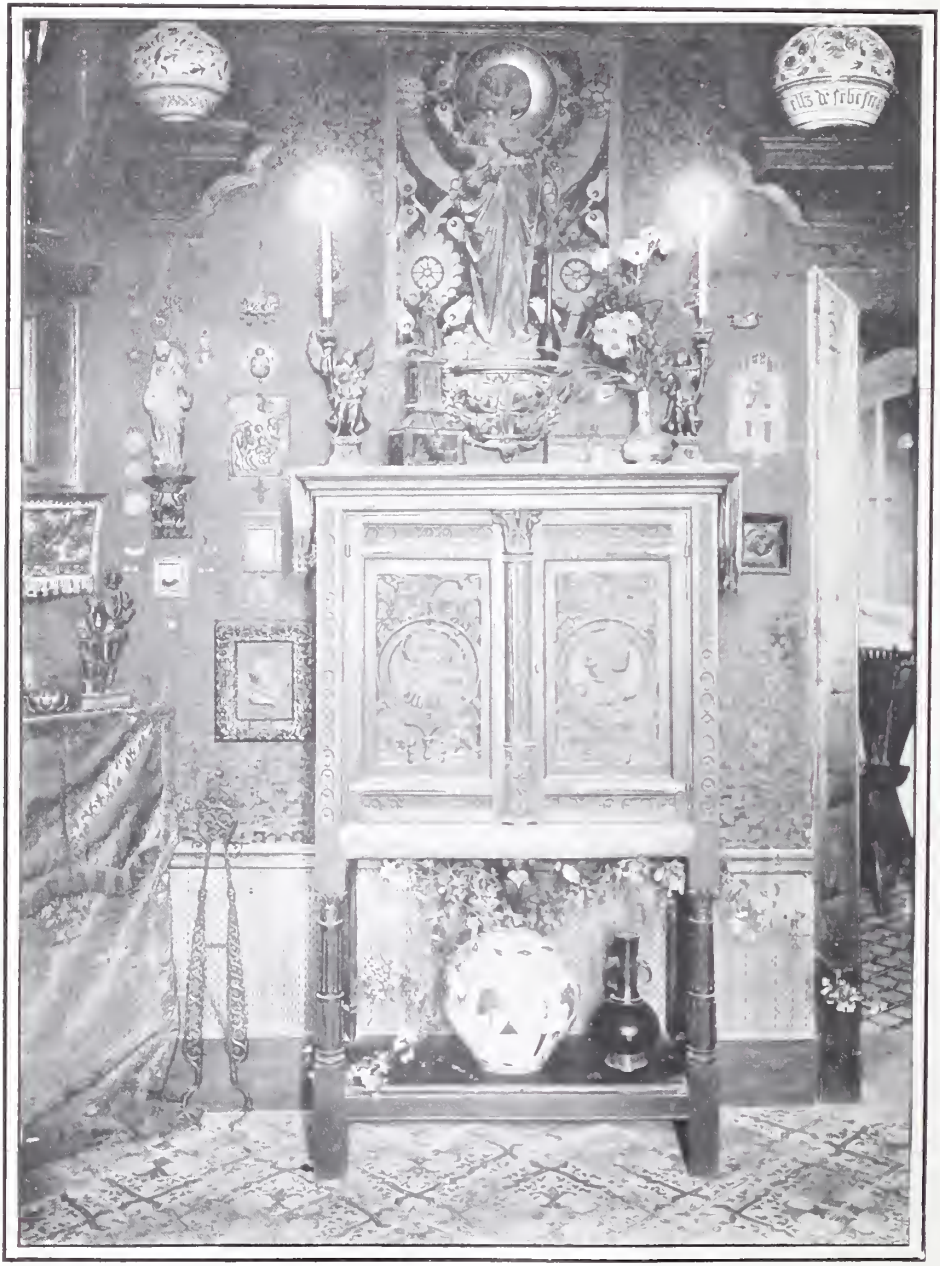


FIG. 11. THE STUDY, ON THE FIRST FLOOR ABOVE THE NARCISSUS COURT.

withstanding the flood of tourists and the more permanent population of villa owners and artists, English, French, German and American, there is a primitive tone to Capri still. As of old the young men go forth to the coral fisheries and at night the old men paddle out with flaming cressets at the bow of their boat to fish for that rosy, blushing little monster, the calamari or squid, a pet dish in Southern Italy. And twice a year the big nets are spread on every hill to snare the quail that arrive spent and wing-worn on their passage to and from Africa.

Fig. 12. Marble wall shrine of the 15th Century.

The villa, however, speaks of every age. Mosaic and stained glass and wall painting meet one here and there, or it is the bronze head of a Greek Medusa as a door-knocker, or a marble wall-shrine from the Cinque-cento with adorning angels in low relief at the opening of a little door, the dove of the Holy Ghost hovering above it, a little shrine dedicated to St. Agnes.

The Villa Narcissus is not all finished, but it has been sufficiently attractive these ten years past to allure from Rome the pupils of the American School of Archaeology, who have visited it as a

FIG. 13. 'A WINDOW LOOKING ON A COURT WHERE SITS A WOMAN IN ORIENTAL GARB.'

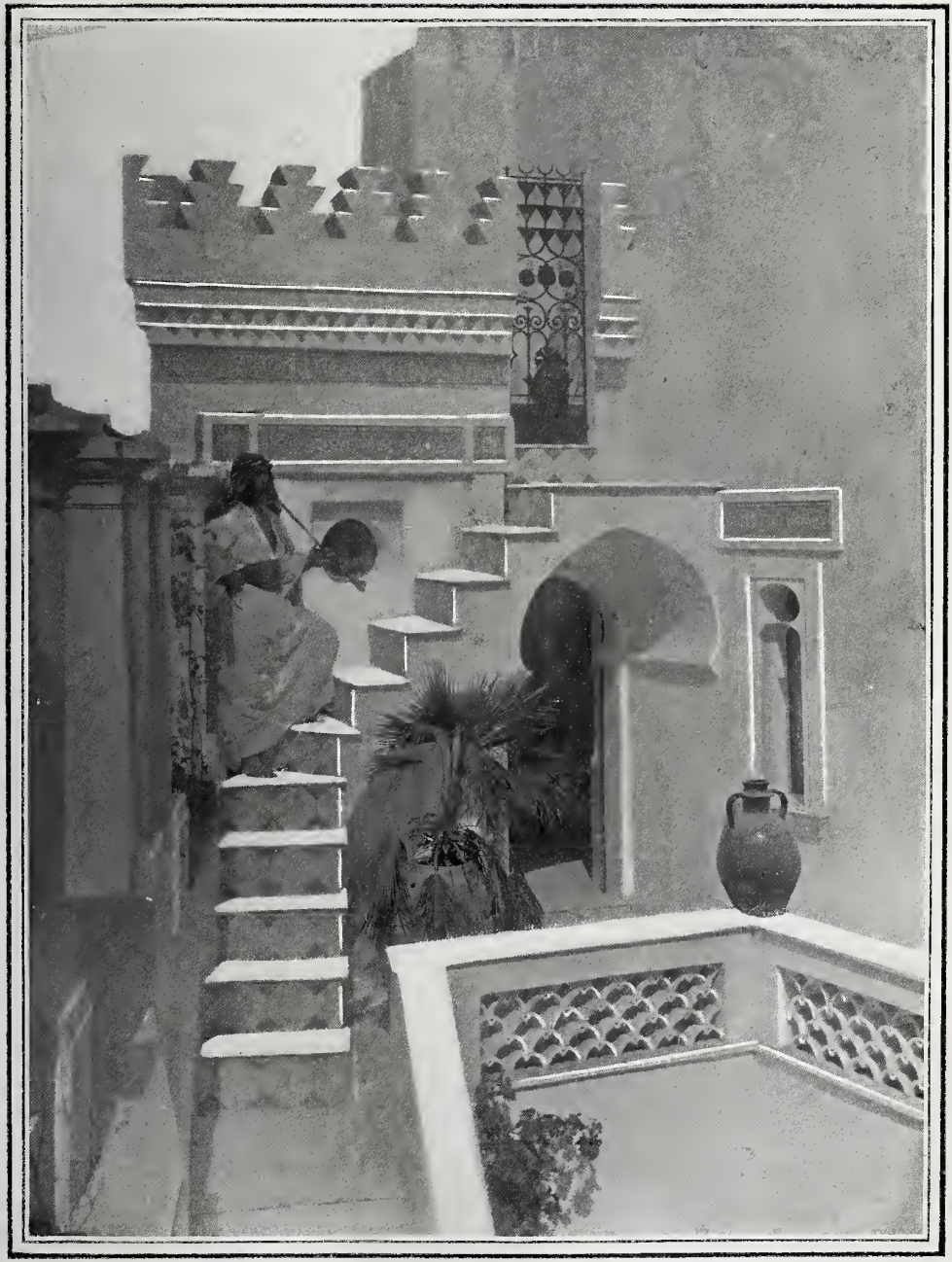


FIG. 14. "MR. COLEMAN, IN HIS ARAB DRESS, MOUNTS THE STAIR THAT LEADS TO AN IRON WICKET."

FIG. 15. ENTRANCE TO THE MOORISH COURT ON THE FIRST FLOOR.

FIG. 16. ORIENTAL TILES IN THE COURT.

FIG. 17. THE OLD ARTIST STANDING BEFORE MR. COLEMAN'S THE FRENCH PAINTER CAIN.

Fig. 18. Stained Glass Window in the Dining Room. Designed by C. C. Coleman.

noteworthy example of what one man can do in the way of arranging a small villa, given time and the requisite taste. Such details as the vine that may be seen clambering up to the sunlight through the marble stair along the wall of the inner court, or the window looking on the court in which sits a woman in Oriental garb, or, in the more comprehensive view in the same direction, the owner's monogram carved on the wall in the shape of three interlacing crescents and the wall tiles well brought out, form a combination of surprises that keeps the visitor on the alert.

In one room we have a fifteenth century carving in wood of the princely lady, St. Elizabeth of Thuringia, whose charity was so great that she had to be disciplined by her spiritual adviser, Conrad of Marburg. Once when he demanded what was in the basket she was carrying to the poor and rudely opened it, the bread was miraculously turned to flowers. The old wood carver has placed a loaf of bread in her hand. Below the figure the cabinet with famous carved doors is also German work. But in truth the bibelots and works of art are from every age, Roman marble vase with delicate floral tracery in relief, marble heads damaged but still beautiful in their mutilation, inscriptions from old walls, and pedestals that once bore vanished statues, Etruscan vases, iridescent glass and mediaeval Italian pottery, the Villa Narcissus is really a little museum in its way, but

Fig. 16. St. Elizabeth of Thuringia.

never makes one aware of it by crowding the objects on one's attention. A Roman profile relief of two men and a Greco-Roman marble bust of a woman are among the most notable pieces. A Maenad carved in coarse stone with the edge of a Latin inscription by the side of the figure is remarkable for the ecstatic attitude and the bold lines of the drapery indicating the madness of the worship of Dionysos. She dances on, close by the wine cellar, in a burst of orgiastic rage.

On its exterior the Villa Narcissus has a strong touch of the Moorish, especially on the long side or that looking on the alley where the stone steps indicate the slope of the land. One sees the Moorish crenelations at the back, the columns where the vines grow, the tilework and the grilles. The majolica plates bearing the legend "Villa Narcissus" are designed, the one by Castellani of Rome, the other by E. D. Sperry, of New York; they are fired with greens, reds and blues, and fit well with architecture largely stucco and tile.

The impression one gets from the Villa Narcissus is a happy blending of the arts with architecture. Sculpture, indeed, is not here as an integral part of the building; nor have we mural painting as yet; but the house is neither large nor sumptuously decorated; it moves within the limits as to expense prescribed by the purse of a painter. It is one of the most noteworthy sights of Capri to-day, and needs but its crowning studio to make it all that an artist may justly ask of Fate.

Charles de Kay.

ARCHITECTURAL ABERRATIONS.—No. 18.

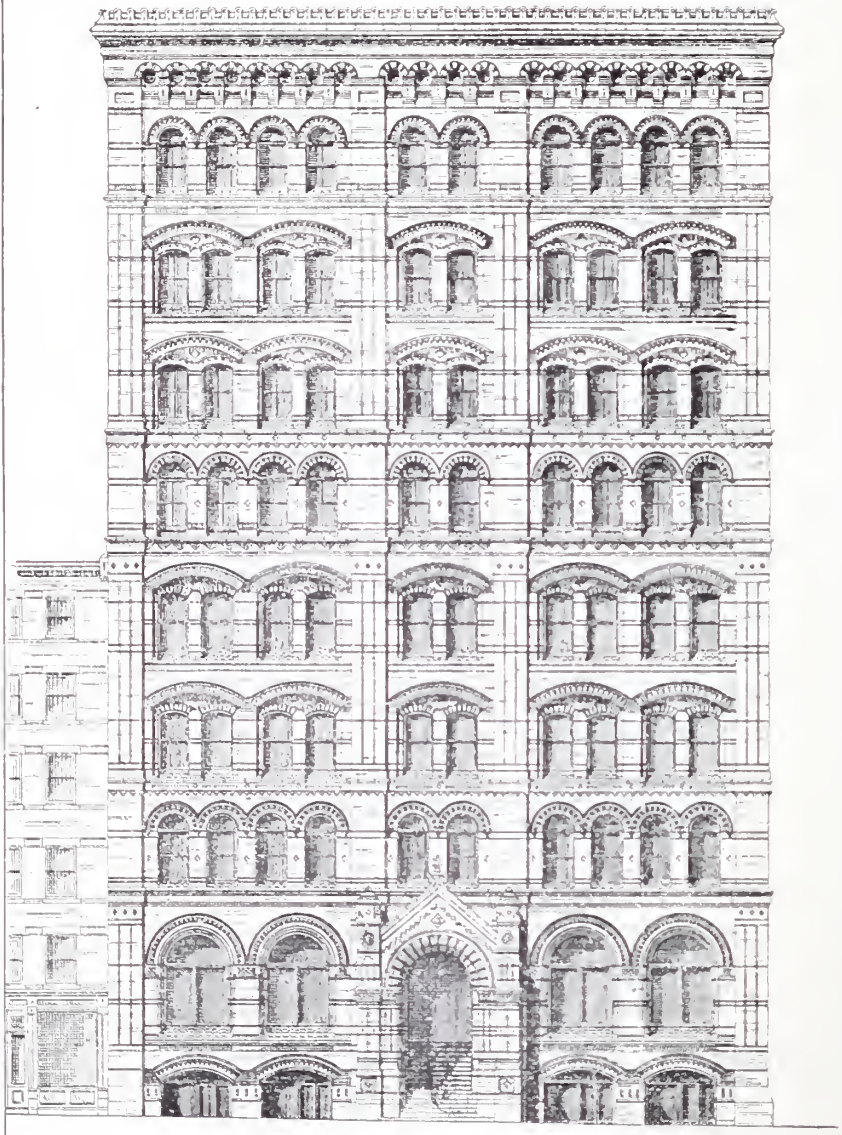
The Nassau-Beekman.

THE Morse Building, so originally called, at the corner of Nassau and Beekman, in New York, has now suffered a change also of name. It is the Nassau-Beekman, in imitation evidently of that very luckily named skyscraper the Broadway Chambers. This latter name is lucky not only because it is directorial, but likewise because what we call an office building they would call in London "chambers." It has its drawbacks, however. It is credibly reported that a Grand Prix of the Paris Exposition of last year is now wandering around the world in search of a certain, or rather highly uncertain "Broadway Chambers" to whom, or to which, it was awarded by the French jurors, under the not unnatural impression that that was the architect's name!

Our concern with the Nassau-Beekman is not a matter of nomenclature, however, but of architecture, and in part of psychology. Because nobody can look at what the new owner has been doing with his purchase, and see how he has converted a creditable building into one highly discreditable, without wondering what can possibly have been in his mind. Why should he have spent good money in spoiling what it would have cost him no money at all to leave alone?

The Morse Building is a little more than twenty years old (1879), the work of two young and serious architects of the time, who tackled what was then the novel problem of an office building nine stories high with intelligence and with more than a fair measure of success. As was said in a criticism of it published at the time of its completion it was "impressive and dignified in the mass and in many places exceedingly agreeable in detail." It was built, of course, when of the two factors that have enabled the modern office building to be constructed, the elevator and the steel frame, only the former was available. The necessity of thickening the walls in proportion to the height made them seemingly as well as really massive. Apparently this appearance of massiveness is one of the things the new owner resents and has tried to remove, in the course of his curious and ridiculous efforts to bring the building architecturally "up to date." The nine stories of which it originally consisted seems to have been about the economic and practical limit of altitude before the steel construction came in to supplement the elevator, since when there has been no defined and understood limit at all, but one owner's sense of his interest will lead him to build twice as high as another, on land of equal costliness and with the other conditions much alike. It is this difference and uncertainty that make the worst architectural results of the sky-

THE MORSE BUILDING
NEW-YORK



ELEVATION ON NASSAU STREET

Farnsworth
Architects
New York.

scraper in the impossibility, through the absence of legal regulation, of securing a skyline for a business street. To the want of this, in turn, is due the chief ugliness of the new business quarter of New York, where every owner is left to build as high as is good in his own eyes, with the distressing results, we all know. Decidedly it would have been better for the architecture of our commercial cities if the steel frame had not come in, and a uniform height of ten stories or less had been fixed by economy of construction, as the limit of five or at the outside six stories had been fixed by the human power of ascension before the elevator came in.

The problem of the elevator building was much newer when the Morse Building came in than it is now, and the essays towards a solution of it much more tentative and experimental. Now, indeed, the problem has, for most designers, disappeared altogether, and there is nothing not only experimental, but generally nothing individual about their several solutions of it. They have all arrived at a common convention. Part of this convention, and architecturally the most advantageous part, is that the middle stories are the shaft of a column and are to be treated together with no differences among themselves. It was in the Union Trust Building on Broadway that that solution was first reached, and at once commended itself to all designers of tall buildings. But that was some years after the date of the Morse Building, and the architects of this are not to be blamed for not having anticipated a discovery, as it may almost be called, which was the outcome of years of experiment. When they built, the architectural unit of a tall building was commonly assumed to be a group or multiple of stories bearing the relation to the whole of a single story to a lower building, and they shared the assumption. If they had built later, they would not have grouped the stories of this middle part of their building by inserting a story of round arched openings between every two stories of segmental openings. Neither would they have enforced a lateral division of each front, triple in one case and double in the other, by projecting piers, though these are very likely of structural significance. The effect of these dispositions is, at any rate, to give the middle of the building, what we now call "the shaft," an aspect at once somewhat capricious and somewhat monotonous, and the monotony is rather enhanced by the sombre material, a dark red brick used in conjunction with terra cotta of the same tint and with black brick logically applied, that is, so that emphasis of color falls with stress of structure. What is admirable in this part is the treatment of the detail, in design, in adjustment and in scale, and it has technical interest in being the earliest instance, at least, in New York, in which the "protected vertical joint" was employed in terra cotta, and this, like every other structural detail, was clearly and cleverly expressed.

But, upon the whole, one would not blame a new owner for feeling dissatisfied with the effect of this middle part of the Morse Building, in view of what had been done since, and trying to improve the effect of it so as to make it more worthy of the bottom and the top. But it wonderfully happens that he left this part alone (unless he cherishes the intention of painting it white to match his new top) and confined himself to the top and the bottom, with which there was no fault to be found. There was a legitimate commercial reason for adding at the top the five stories which the new construction has made feasible. The powerful and well-modelled cornice with its attic of bulls' eyes might well have been raised above the additional stories. The original designer could have made the addition, even to the architectural advantage of the building. But the actual owner wanted it cheap and nasty, and the top with which he has surmounted a respectable edifice would vulgarize anything. For the former respectable top is substituted two stories of plain red brick piers with iron sashes, window frames, and a balcony projected upon huge corbels of sheet metal, and four additional stories are added above in white brick, with the same metal window framing, the whole concluded with a Grecian cresting, also in sheet metal.

But it is the treatment of the base that is most exasperating, since the base was the best part of the building and was very good indeed. It was one of the last and one of the best works of the Gothic revival in New York, of that true Gothic revival which consisted not in the reproduction of Gothic forms, but in the application of the Gothic principle of functional expression. The piers and pinnacles of the main entrance were perhaps a little clumsy. Perhaps the vigor of handling degenerated into "brutality." But the entrance was none the less a considered and artistic piece of design, and a grateful object Better yet, in fact one of the most interesting pieces of commercial architecture in New York, was the two-story basement itself, the tall principal story with its round arches of red brickwork, with a temperate use of black and of moulded brick, admirably expressing the construction, over the segmental arches of the sunken story, turned between springers of black brick. All this was as effective as it was exemplary, one of the best things in its kind in New York, we repeat. It is at once depressing and irritating to see what the Vandal has done with it. When he set his workmen chipping away the brickwork of the well-studied arches, the instructed passer inferred that he thought he needed more light for the openings of the principal story, and that he was going to square them out to the line of the ceiling and lintel them. Not at all. He gets not a square foot more of light, if he even gets as much. His alterations are exclusively architectural. And that is what makes his work so exasperating, that he should

THE NASSAU-BEEKMAN.

imagine that his pretence of architecture is more acceptable to anybody than the real thing, which he ruthlessly destroys to make room for it. The perfectly commonplace and meaningless assemblage of round arches with protruding keystones over segmental arches also furnished with protruding keystones, with which he has hidden a work of architecture is a wonder. The new basement is a mere sheathing of artificial stone in imitation of white marble absolutely incongruous, in material as well as in treatment with the honest brickwork of the superstructure. He has "covered one thing with another thing to imitate a third thing," which if general would not be desirable. It is an amazing exhibition of presumptuous ignorance and unconscious impudence. At least it ought to be amazing, and would be if we did not recall other like examples of the same qualities. Nobody who is entitled to an opinion would maintain the skyscraper which has succeeded the American Exchange Bank, or would expect the skyscraper which is to succeed the Continental Bank to be architecturally as valuable as the work it displaces. But in these cases there are legitimate commercial considerations for the displacement of the architecturally better by the architecturally worse. In the case of the Morse building the change is "a matter of taste." It is a paralyzing piece of insolence. The owner has spent good money, though to be sure the minimum amount and in the meanest way, in spoiling good work because he liked bad work better, or expected that his tenants would like it better, and that he could more easily get them to take quarters behind the stupid sham with which he has fronted and hidden a piece of architecture than behind the architecture itself. It is a strange calculation, almost insulting to those upon whose bad taste he so confidently counts. He is a subject for the psychologist. And a subject for the psychologist, also, is the "artchitect," who has been invoked and who has consented to convert a work of architecture into a work of artchitecture, to horganize and slatterrify a respectable building into this absurd and incongruous and brainless sham. Did the artchitect, too, really imagine he was doing good to be building and bringing it "up to date." Did he try to bring his owner to a better mind, and assure him that he was engaging in a work of stupid vandalism? Or is it possible that he saw nothing but the commission he was to get for spoiling the building, and that he had no qualms about obliterating the work of his intellectual superiors? These are questions of a certain interest. But the result is the same, a piece of impudent vandalism. When anybody tells you that the public taste in architecture is improving, you just show him a picture, or appeal to his recollection, of the Morse Building, and then walk him to the indicated corner and tell him to contemplate the Nassau-Beekman.

THE ARCHITECT'S PORTFOLIO

OF

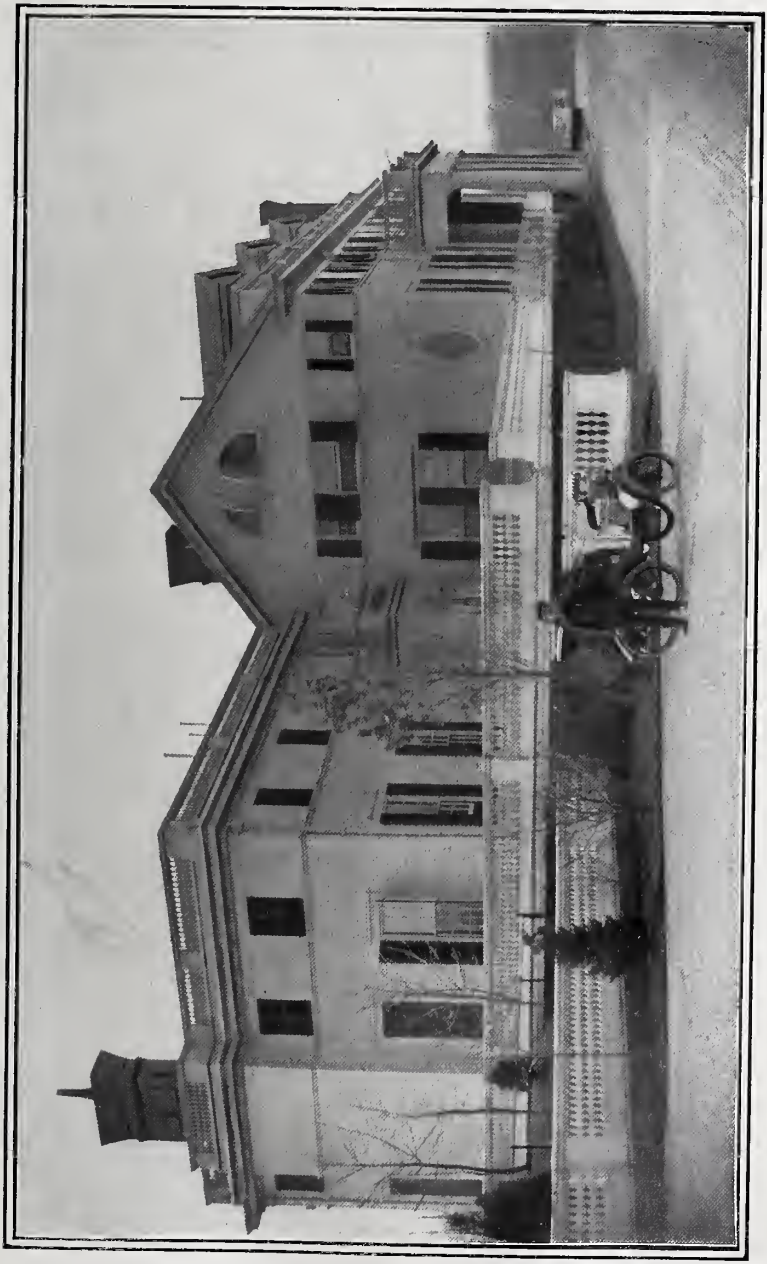
RECENT AMERICAN ARCHITECTURE.

A CHRONICLE IN BLACK & WHITE

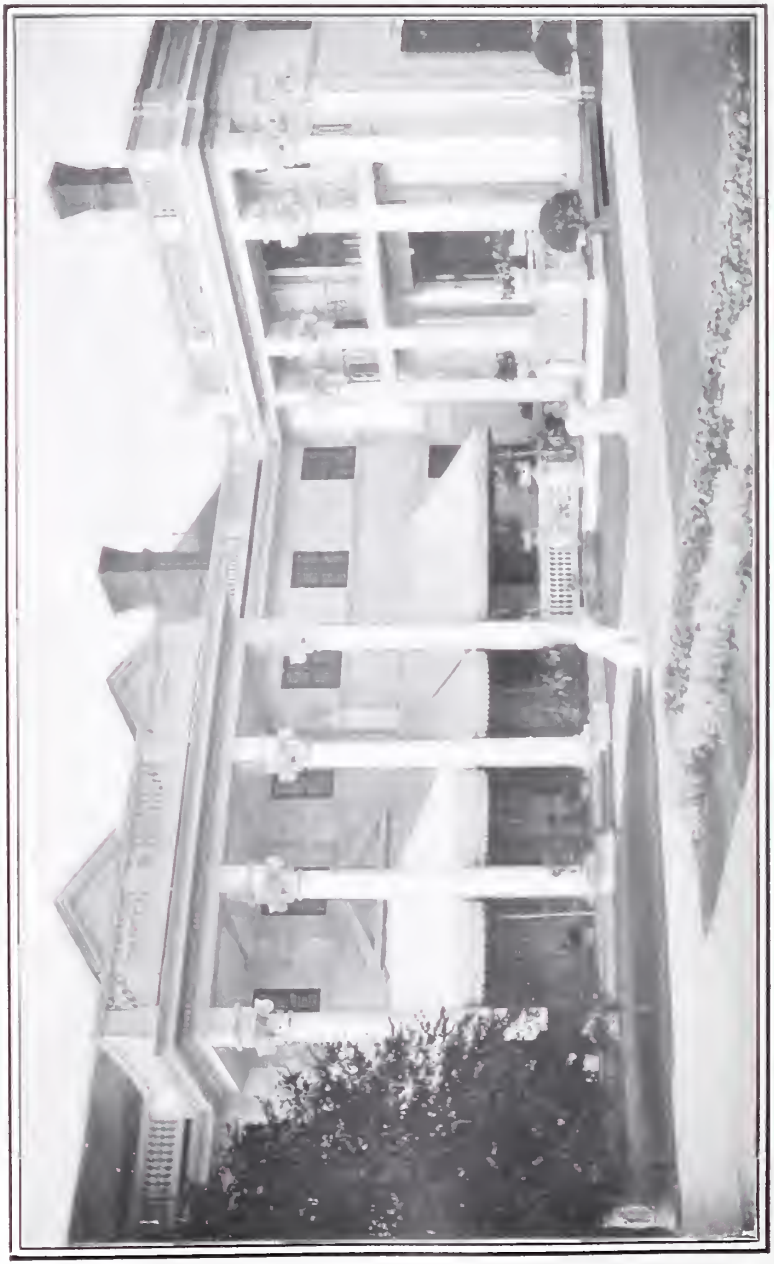
Hempstead, L. I. GATE ENTERING THE GROUNDS OF THE HOUSE OF O. H. P. BELMONT. R. H. Hunt, Architect

Hempstead, L. I. HOUSE OF O. H. P. BELMONT SEEN FROM THE DISTANCE. R. H. Hunt, Architect.

HOUSE OF O. H. P. BELMONT AT HEMPSTEAD, L. I. R. H. Hunt, Architect.



HOUSE OF O. H. P. BELMONT AT HEMPSTEAD, L. I. R. H. Hunt, Architect.



HOUSE OF O. H. P. BELMONT AT HEMPSTEAD, L. I. R. H. Hunt, Architect.

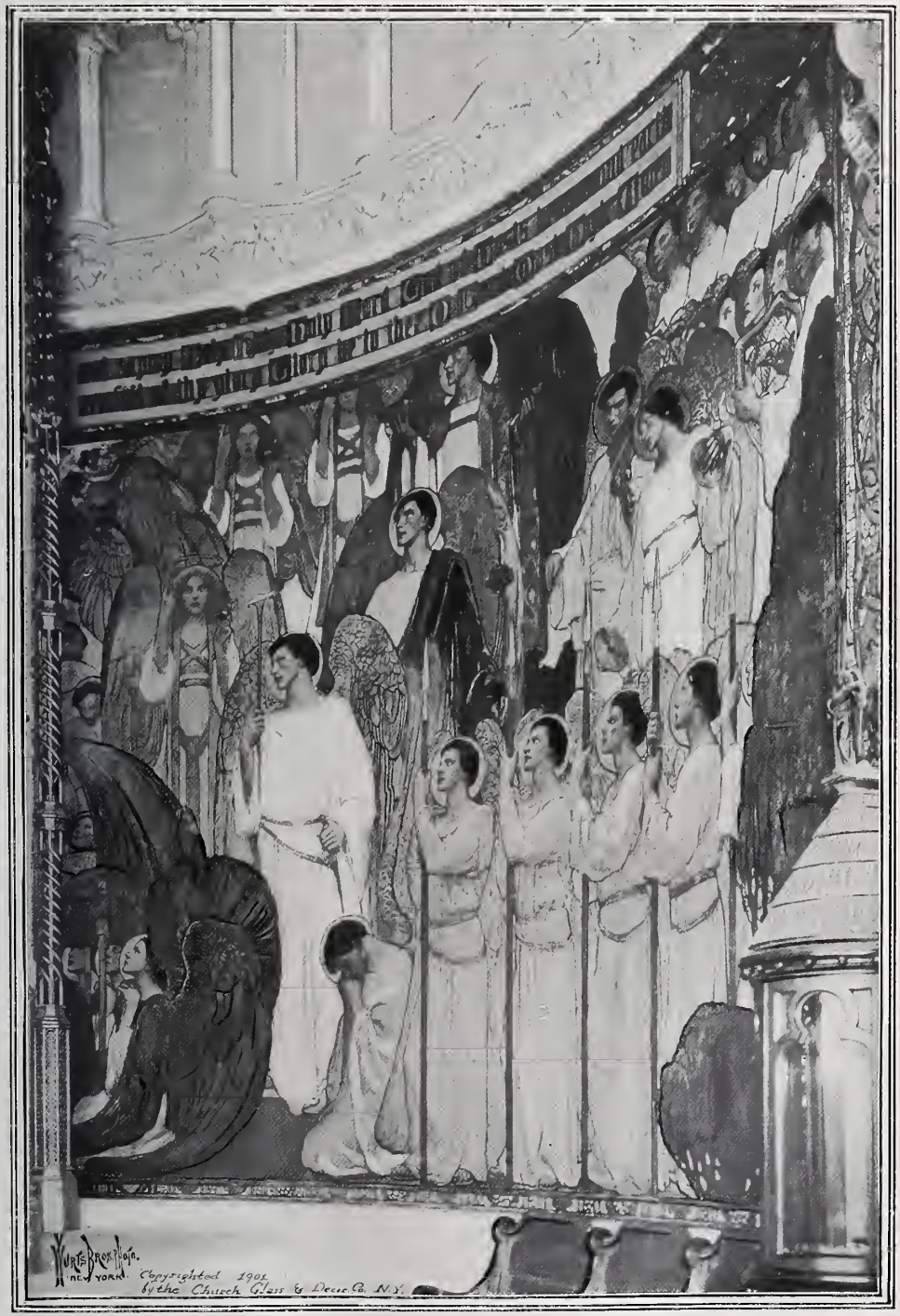
STABLE OF THE BELMONT HOUSE.

Hempstead, L. I. R. H. Hunt, Architect.

MURAL DECORATION BACK OF THE ALTAR, ALL ANGELS' CRURCH.

Broadway and 71st Street, New York City. The Church Glass and Decorating Co.

Designer, Miss Violet Oakley.



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Opinions Official and Unofficial.

Do Skyscrapers Pay?

The economic aspect of the unrestricted construction of skyscrapers is not a matter which has ever received very serious attention. It has been generally assumed that however they may mar the appearance of a city, they are undoubtedly a great business convenience, and a fertile source of real estate values. Howell's somewhere calls them the "triumph of commerce and the despair of art," or words to that effect. But in the light of certain recent developments of skyscraper economics in New York and elsewhere, we are justified in putting a question mark against this commonly received opinion. The "skyscrapers" undoubtedly pay their owners, just as protection pays the protected manufacturers; but, quite apart from their effect upon the looks of a city, or even upon public health, it is a very doubtful matter, whether their practically unregulated construction, so far as height is concerned, has been of any general economic benefit to New York City.

From the point of view of the majority of the property owners, it can be conclusively shown to be a drawback rather than a benefit. The erection of tall office buildings makes for the concentration of business in small specially favored localities, such as that within a radius of four hundred yards of the Stock Exchange. A limitation on the height of such buildings, on the other hand, would make for the distribution of this business over a larger area, and the consequent distribution of the real estate value created among a larger number of property owners. The effect of the distribution on values would be to diminish the cost of real estate on certain parts of Broadway, Wall St. and Broad St., and to increase it on other streets a little further away. Assuming that the same amount of business would be transacted under a regulated as under an unregulated system, this business would require, of course, a larger number of smaller buildings, and the augmented demand for space all over the city, caused by the purchase of sites for a larger number of buildings would bring about a pretty general increase of values. Moreover, it would not decrease the amount of rentable space within the peculiarly advantageous localities as much as may be supposed, because the owners of eighteen and twenty story buildings have found it necessary in a great many cases to purchase adjoining property, in order to protect their light and air. This is true in the case of the Mutual Life, the Washington

Life, the Park Row, the Commercial Cable, the Atlantic Mutual, the Singer, and many other buildings in New York City, and the result is that many very well situated parcels of real estate are withheld from improvement, which in case there had been a limitation of the height of buildings to eight or nine stories, would have been most assuredly improved. The amount of property so withheld varies in different streets, but probably, on the whole, it would amount to as much as a fifth of the space occupied by the tall buildings.

From the point of view of business interests involved, it is not, perhaps, so easy to make out a good case for regulation. The disadvantages of wider distribution of office buildings would in some cases make no difference at all; and in all cases it would be partly neutralized by the constant use of the telephone, and an efficient system of surface transit. But it is probable that a legal restriction as to height would have raised the rents in buildings very favorably situated in the Wall St. district of New York, because the business of brokers, bankers, their lawyers and their clients' needs for its transaction a good deal of running about, both by principals and clerks, and an office, which reduced the amount of this traveling to a minimum, would naturally possess an increased value. It may be doubted, however, whether these increased rents would occur in any except the Wall St. district, and in any case a deduction should be made on the score of the enormous bills for electric lighting, which the "skyscrapers" cause the tenants of the lower floors on the narrow streets downtown. On the whole it is questionable whether after all allowances are made, business in Wall St. and elsewhere could not be conducted as economically and conveniently in eight as in eighteen story buildings.

In view of all these considerations which make the economic advantages of "skyscrapers" at least extremely doubtful, except to the owners of very advantageously situated property, why is it that there has been no more persistent and successful attempt to bring about such regulation? For, if their economic advantages are doubtful, their aesthetic and sanitary disadvantages are manifest and serious, so much so that abroad there is no question about keeping the height of all buildings down to such a level that they will not deprive the street of too much sunlight, or be too much out of scale with its width. The explanation in general seems to be that in this country private and special interests always have more energetic and insistent advocates than the wider public interests. Even Chicago, where a limitation of height to ten stories has prevailed for a good many years could not stick to its guns, but has recently given the favored property owners their own way. It is

not easy for a Common Council to resist men who declare that in case restrictions are removed they are prepared immediately to spend $20,000,000 in new buildings. As for New York, in spite of its claims to metropolitan eminence, it has always been as clay in the hands of the real estate owner and speculator, and the consequences of this let-alone policy, which in another direction has cost the city so much in the way of alienated franchises, are in this matter both irremediable and disastrous. They are irremediable, because to establish a limitation at the present time, after so many "skyscrapers" have been erected, would be an unfair discrimination against other unimproved property in the favored neighborhoods, and they are disastrous, because the cost of curing the congestion which these "skyscrapers" will eventually cause is incalculable. This is an aspect of the matter which is too frequently overlooked. If during the next twenty-five years there are continued to be erected an unlimited number of from twelve to twenty story buildings on the narrow streets and infrequent avenues of a city, badly planned as they are for the distribution of traffic, the outcome will be a congestion of street traffic and transit, of which the Brooklyn Bridge at present gives some inkling, and when this times comes the remedy for this congestion will be as expensive as its perpetuation will be intolerable. It stands to reason that if very tall buildings are erected in large quantities upon streets that were laid out only for very small ones, and if steps are not early taken to adjust this street system to the increasing demands which are being put upon it, this combination of energetic private building, with negligent public administration, will do more to damage the business interests of the city than any amount of restrictive regulation.

Good Art as an Advertisement.

In the foregoing article we have expressed a doubt whether the bad art of the "skyscrapers" would turn out to be as profitable an investment for the city of New York as is generally supposed. If so much be admitted, can the thesis be carried further? Can it be said that good art is a paying investment? As it happens, this question has recently received an answer which is aggressively and unequivocally affirmative. Mr. Brook Adams, at a dinner of the National Art Club, tried to convince his hearers by many appeals to history that it was a sound commercial instinct which led a people to devote much of its talents and energy to the creation of a great and original art. Such an art was very profitable for two reasons—because in the absence of a great art

a people waste their money in seeking that kind of pleasure elsewhere, and because the countries which possess such an art attract money-spenders from all over the world. He consequently calls the Athenian Acropolis "the most refined, the most effective, and the cheapest form of advertising ever devised." And since in our modern life advertising is more than ever a necessity and a power, a country can ill afford to dispense with that profit which is derived from a famous art, and can still less afford to pay that profit to other countries. Hence he infers that New York should be made a thing of beauty, thereby saving for her shop-keepers the $100,000,000 per annum which Americans now pay into the pockets of the shrewd and businesslike French and Italians.

All this sounds plausible, but we are not convinced. Devotion to his art generally pays the artist, and New York will be even more attractive than it now is to other Americans in case it were the center of an original and popular art movement, but I do not believe that any art which Americans of the present generation could create would either prevent their fellow-countrymen from spending that $100,000,000 abroad or tempt foreigners to visit this country in appreciably larger numbers. Art is not in this sense profitable to the people that produce it; rather is it profitable to their descendants, which is a very different thing. What we need in America, in order to have an art that pays a good ten per cent. on the investment, is an inherited ancestral art legacy, and our ancestors were, I am afraid, entirely callous to our opportunities of profiting from their artistic work. Art is not very much of an advertisement until it becomes history or conscious tradition; and then it simply takes its place among the other relics of a former time. It is the atmosphere of consciously recognized and valued historical tradition which Americans seek in Europe, and will continue to seek, even after they become much more fruitful and distinguished in artistic expression than they are at present. True, they flock to Paris in large numbers, and Paris is superficially a modern city—the one great conscious attempt to make a city that shall have some pretence to formal beauty; but they flock in numbers quite as large to London, which is not beautiful at all, but which in its strong individuality and characteristic manners and remains has an equal fascination. Moreover, the city of Paris, modern as it is, is alive with traditions and memories. Its very present is a sort of monumental composite photograph of a thousand years of architectural history.

A hard-headed American business man, in order to be convinced that art was a good investment, would want returns for himself and his own generation. He does not care about investments that begin to draw interest a century after his death. "The

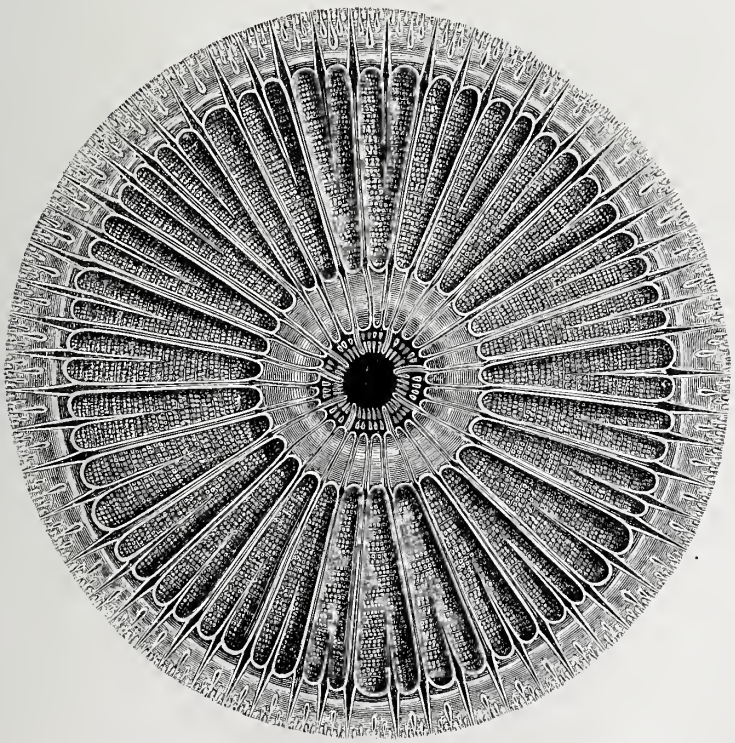
exquisite columns of Corinth," says Mr. Adams, "still stand and draw revenue," while the "wasteful and vulgar" Temple of the Sun at Carthage no longer exist to be of profit to the Frenchmen that occupy this Carthaginian land. True, but could the people who originally paid for the "exquisite columns" of Corinth have placed the "revenue" which these columns draw at present to the credit of their original investment? As for the Parthenon, I can well believe that the Periclean transformation of the Acropolis was a cheap piece of advertising, for the businesslike Athenians of the 5th century showed their commercial instinct by obtaining the money to pay for it out of the treasuries of their allies. I can well believe, also, that it was an effectual piece of advertising, because the Spartans, if no others, certainly evinced a masterful desire to visit the city. But I should like to point out that the income on the investment did not amount to much until some centuries later, during the period of Graeco-Roman civilization, and that thereafter for more than a thousand years it paid no interest at all, and that only in the 19th century has this cheap piece of advertising been particularly profitable. Obviously there are so many uncertainties and so much delay connected with this kind of investment that a business community which sunk too much money therein would soon become bankrupt, no matter how big were the dividends of their remote descendants.

Seriously, to assert that New York should seek to be distinguished as an art center because Athens and Paris have profited by art, is just about as sensible as to assert that New York should seek to be a religious center because Jerusalem and Rome have found the reputation of being Holy Cities a cheap and profitable form of advertising. If New York ever becomes a beautiful city, and the seat of an original and popular art movement, it will not be because art pays, but because Americans become possessed of a craving for beautiful things, and because this craving is strong and general enough to make men work hard and long and late to satisfy it. The trouble with Americans is that art is for them too much of an advertisement and too little of an instinct. The first question they ask of a work of art is not what it is, but what does it advertise; that is, what is its history, associations and meaning? And so they come to pictures and statues with their heads full of ideas, but with their senses dull and their taste untrained; and the art of a thing, which is just the thing itself, escapes them. How futile, then, to try and persuade New Yorkers to beautify their city because art is, perhaps, more profitable to Frenchmen than the manufacture of steel is to Americans. What the latter must learn is, not that beauty pays, but that it is in and for itself a worthy and

delightful thing. Virtue may not be, and frequently is not, its own reward, but beauty is, I believe, always its own reward—which is the reason it exercises such a perennial and irresistible fascination over men.

Finally, it is not only futile to say art is a good investment, but it is untrue. Beauty has its compensations, but they are wholly sensuous and intellectual. From the economic standpoint it is a sheer luxury—palpable and inexcusable unproductive consumption. When Mr. J. P. Morgan buys a Raphael for $500,000, he is taking just so much money out of a form in which it is economically productive and converts it into a form in which it is economically useless. The picture has, of course, an economic value, and might produce a small income if exhibited for money, but in that case Mr. Morgan would merely be transferring part of his own loss to the people who paid the entrance fees. Moreover, beauty, besides being a rank extravagance, is, under modern conditions, purchased at a cost for which there can be on economic grounds absolutely no justification. Mr. Brook Adams rightly says that "the greatest economic pitfall of our western civilization is waste"; but he should have added that under contemporary conditions what little good art we have is obtained by means of a waste that is positively appalling. The industrial experimentation necessary to obtain efficient results is nothing to the fearful extravagance which men and women commit in the name of art. Think of the many thousand girls who sit pounding the piano for an hour or more a day in order that a few score may play decently well. Is all this dissipation of energy a good investment? Is there even any aesthetic compensation comparable to the enormous expenditure of time and work? The machine-made music of the Pianola is not art, but it is comparatively economical. In the same way when one remembers the prodigious number of second, third and fourth-rate pictures which have to be painted in order that a few dozen masterpieces may come into being and survive, one can scarcely avoid the inference that the methods of a profligate Italian prince of the 18th century was a good economy compared to those under which modern art is produced. The conclusion cannot be escaped that art is essentially and irretrievably a matter of waste, and that beauty is a maiden who takes the eyes of men out of their head that she may empty their pockets. Let the facts be fairly faced: Art is a worthless investment and a dangerous advertisement, for the cities in which it has existed in greatest perfection merely advertised to the world that they were wealthy and in some measure politically weak. If they were not wealthy they could not have afforded their arts, and if they had been politically strong their energies would have received a more practical

expression. So it was with Athens and with Florence, and the same lesson, incomplete as yet, may be drawn from modern French history. In order to create a great art, a people must make great sacrifices and incur great dangers. If the Americans wish to be the commercial leaders of the world and nothing else, let them keep on making standard products at cheap prices; let them keep their business methods and industrial machinery as fluid as possible; let them turn over their output just as often and as thoroughly as they can; and let them, above all, abjure anything but an imitative, a half-hearted and purchasable excellence in the arts. The value-in-exchange of beauty is accidental. Its real value is final, inconvertible, self-contained and utterly unprofitable.



NATURAL ORNAMENT.—ARACHNOIDISCUS JAPONICUS.

HOTEL DE VILLE, BOULOGNE.

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AMERICAN GARDENS. Edited by Guy Lowell. Bates & Guild Co., Boston, 1902.

This handsome book is the first fruits of the aroused American interest in the formal garden. Out of some fifty-five places illustrated in its pages, more than three-quarters are modern gardens—so very modern that, while none are perhaps more than a dozen years old, many of them have not been planted long enough to allow a good growth to the shrubs and vines. And what a contrast between the old and the new! The old are so very old that they are going to seed; they are dilapidated and neglected, bespeaking, except in a few cases, owners who cannot afford or do not care to keep them up. But the new are equally trim and smart and up-to-date—pointing as plainly towards our American habit of rapid and ready achievement. One cannot help wondering what sort of a figure they will cut one hundred years from now. Another noticeable fact is that these gardens are in the majority of cases the gardens of well-to-do rather than very rich people. American millionaires are building up extensive and elaborate country places, but they have not as yet taken to laying out formal gardens.

The illustrations in the present book are confined to formal gardens, because, as the editor, Mr. Guy Lowell, states, "naturlly" planned gardens "are impossible adequately to illustrate by photographs," and because "though they present examples of beautiful scenery, they are of no value as examples of garden design." In other words, they are not gardens at all, unless one proposes to obliterate the distinction between scenery and gardens. Mr. Lowell in his introduction dips lightly into the controversy betweer formal and natural gardens, and declines to take sides. "It is all a question," he says, "of appropriateness and of personal and individual art." But appropriate to what? From the context Mr. Lowell apparently means "appropriateness to American surroundings." This is vague enough to be both unobjectionable and meaningless. One might as well try to cut a suit of clothes appropriate to the liberty-loving sons of America as to design a garden appropriate to the "surroundings" of such a country as the United States. What a garden must be appropriate to is to its location and to the house that goes with it, and any garden bearing definite relation to a plan including a residence, stable, out-buildings, approaches and the like must be in some measure formal. Beyond the radius of these definite relations the landscape should be made as little formal as convenience will permit; but within these limits the formal is in point of fact the only natural method of treatment.

If we may judge from the modern gardens illustrated in this book, we should say that American architects have not as yet mastered the conditions of garden design. Some of the gardens sprawl limply over too large a space; others are compact enough, but show an entire lack of appreciation of values and proportions in the open air; they look as if their architects had forgotten that they were not dealing with space enclosed within four walls, and were deceived as to the effect which a good paper plan would have when carried out on the ground and under the sky; still others have paid unsufficient attention to the planting, which appears to have been turned over to a German gardener. Exceptions, however, should be made in the case of two designers, whose work bulks large in the book, viz.: Mr. Charles A. Platt, of New York, and Mr.

Wilson Eyre, Jr., of Philadelphia. Their gardens, while differing essentially in feeling, are logically and relevantly planned, properly spaced, defined and enclosed, and yet still carry with them an open-air atmosphere.

OLD-TIME GARDENS, NEWLY SET FORTH. By Alice Morse Earle. Pp. xviii., 489. 204 illustrations. New York: The Macmillan Co. 1901.

The mere title of this work is sure to arouse interest at this moment when the American public is awakening to a wholesome interest in a long-neglected subject. The popular sense, too, that has lately been aroused in the historical past of this country will lend attractiveness to the subject Mrs. Earle has chosen for her latest essay regarding Colonial times. The author is not only an experienced writer, but in treating of old-time gardens she is dealing with a subject that she knows, as far as it is possible to know it, "at first hand." Mrs. Earle passed much of her earlier days amid a very lively reminiscence of old Colonial life. She was fortunate in the "survivals" that surrounded her childish experiences, and her more recent studies in Colonial life and manners have equipped her with a substantial basis for the delightful sentiment and affection which she possesses for the "far off things" of our national career.

We do not know that there is anywhere in this country a tolerably complete survival of the real Colonial garden. What do remain are fragments here and there, outlines, suggestions, sadly defaced by time and irreverent neglect and ignorant treatment. These survivals Mrs. Earle has carefully sought out in all parts of the country, chiefly, of course, in the South and in New England. She has collected photographs of these and discourses about them in a spirit of fine sympathy that contains a deal of the charm of the old peaceful summer-days. We wish she had striven to give us also some plans as an aid to a better understanding of the photographs. Evidently she has made a careful study of ancient sources of information, and the stories she has to tell of the flowers loved and imported by the early settlers form some of the most delightful and instructive contributions of a thoroughly readable book.

EARLY RENAISSANCE ARCHITECTURE IN ENGLAND.—A Historical and Descriptive Account of the Tudor, Elizabethan and Jacobean Periods, 1500—1625. For the use of Students and others. By J. Alfred Gotch, F. S. A. London: B. T. Batsford. New York: Charles Scribner's Sons. 1901.

The architecture produced in Great Britain by the Renaissance—say between the years 1500 and 1650—has never been the subject of much historical interest in this country. It has received nothing like an equivalent of the consideration given to the work done in France during the same epoch. Confessedly, its importance, both aesthetically and historically, is inferior. It has nothing to offer comparable in high intrinsic worth to the chateaux, and churches produced in the sunnier artistic country across the Channel. In France there existed not only a much more sensitive atmosphere for all things artistic, and a more sympathetic spirit for the "new learning," but the land itself was favored by being geographically more proximate to the great event that from beyond the Alps stirred the soul of the modern civilized world.

Nevertheless, the English Renaissance possesses elements of more than local value, and in a sense what it lacks in high importance is offset in no small measure by peculiar and picturesque interest. Moreover, by force of historical compensation the Elizabethan, and more so the Jacobean country houses scattered throughout England possess to-day a value as "modern precedents" quite denied to the statelier chateaux of France. True, these English buildings have acquired some vitality from the high development and persistence of country life in England, but this very fact gives them a contemporary value, a working interest possessed in like degree by no other examples of domestic historical architecture. No one will assert that the English home, historical or otherwise, is a suitable type for American conditions, but with the growth of country life in the United States it is certainly full of suggestions for our architects until the happy day arrives, if ever, when we shall have evolved from our medley of effort a native and complete expression of our own requirements. For the present, we cannot but think that the happiest sources of inspiration available for our architects when dealing with the country

place are the Jacobean mansion and the Italian villa. And in both cases the best examples to seek are approximately the earlier. About the British work there is a quite unmatched homeliness and picturesqueness, the last mentioned quality being due in no small measure to the fact that the Renaissance in England was only in a negligible sense a Latin importation. The Englishmen never arrived at sympathy with the Italian, or even with the Frenchman. The "Italianization" of English high society, the product of dilettanti travel in Tudor days, was never popular. Henry VIII.'s efforts, born of rivalry with Francis I., expired with the death of the British monarch, and when the impetus of the Renaissance arrived on English shores it came from the source to which Anglican civilization owes so great and so neglected a debt, viz., The Netherlands. It is from that quarter that English architecture of the period derives much of its quaintness, many of its distinctive features, no little of that fantastic crudeness, poor and jejune, but heightened to a value almost intrinsic by the power of a venerable antiquity. We quite agree with Henry James that some buildings have been wrong for so long that they have acquired the prerogative of the right.

The entire subject of English Renaissance architecture is covered by Mr. Gotch's work, which prompted these remarks. The book does not compete with the author's former production, "The Architecture of the Renaissance." The latter is hardly a history, but a series of examples of Elizabethan and Jacobean buildings. The later volume is a systematic text-book, which merits the fullest praise. There is nothing to be compared with it for completeness and accuracy, and it is only left to the reviewer to endorse it and recommend it without qualification. The abundant photographs and the carefully prepared plans—all to the same scale, mark you! where necessary—would alone be the making of a less scholarly work.

A HISTORY OF ARCHITECTURE IN THE COMPARATIVE METHOD, Etc. By Professor Banister Fletcher, F. R. I. B. A., and Banister F. Fletcher, A. R. I. B. A. Fourth edition. Revised and enlarged. London: B. T. Batsford. New York: Charles Scribner's Sons.

This, the fourth edition of the work originally published in 1896, by the late Professor Fletcher, is by reason of a very complete revision and extensive augmentation, practically a new book. The labor has been most conscientiously performed by Professor Fletcher's son, Mr. Banister F. Fletcher, whose capacity as critic and historian in the field of architecture is known to our readers through articles that have appeared from time to time in the pages of this magazine.

It is not exactly an easy task to justly appraise the value of this work. The "comparative method" as used therein is not in our judgment of much value as an historical or critical apparatus. No doubt it will be found of some account by the student still in an elementary condition of mind, serving to direct his attention to certain rather obvious facts and dissimilarities, but most of these are more constructional than aesthetic, and can hardly be said to interpret and develop the architectural differences that distinguish one style from another. The "method," apparently most scientific, is in reality crudely empirical, and is frequently forced by a decidedly procrustean attempt at comparison. It is easy enough to say that a particular architectural style is the resultant of geographic, ethnic, social and historical forces; it is quite another thing to demonstrate the thesis accurately and definitely so that a student may recognize with any degree of clear certainty the facts due to one cause and to another. The facts are illusive, if not deceptive. Too often, indeed, the facts are read by the theory—the theory is not logically and certainly read from the facts.

In our judgment the scheme of this book is defective. That is the fault of the work. Its excellences, however, are more than a sufficient offset. A vast amount of information not always put before the student has been brought together in its pages. The text is clear and in statement accurate, the illustrations particularly abundant and excellent. There is no single volume in English that contains so many. The general result is a good text-book for elementary study and reference, not a book for delight or for reading.

RECENT BOOKS.

THE IVORY WORKERS OF THE MIDDLE AGES. By A. M. Cust. London: George Bell & Sons. 1902. New York: The Macmillan Co. $2.00. (Handbooks of the Great Craftsmen.)

GIOTTO. By F. Mason Perkins. London: George Bell & Sons. 1902. New York: The Macmillan Co. (The Great Masters in Painting and Sculpture.)

REMBRANDT VAN RIJN. By Malcolm Bell. London: George Bell & Sons. 1901. New York: The Macmillan Co. $1.75. (The Great Masters in Painting and Sculpture.)

THE BASES OF DESIGN. By Walter Crane. London: George Bell & Sons. 1902. New York: The Macmillan Co $2.25.

THE ITALIAN RENAISSANCE IN ENGLAND. Studies. By Lewis Einstein. New York: The Columbia University Press; The Macmillan Co., agents.

FRA FILIPPO LIPPI. By Edward C. Strutt. London: George Bell & Sons. 1901. New York: The Macmillan Co.

LORENZO LOTTO. An Essay in Constructive Art Criticism. By Bernhard Berenson. Revised edition, with additional illustrations. London: George Bell & Sons. 1901. New York: The Macmillan Co.

MONUMENTS OF THE EARLY CHURCH. By Walter Lowrie, M. A. New York: The Macmillan Co.

EARLY RENAISSANCE ARCHITECTURE IN ENGLAND. A Historical and Descriptive Account of the Tudor, Elizabethan and Jacobean Periods, 1500—1625. For the use of Students and others. By J. Alfred Gotch, F. S. A. With eighty-seven collotype and other plates, and two hundred and thirty illustrations in the text. London: B. T. Batsford, 94 High Holborn. New York: Charles Scribner's Sons, 153-157 Fifth Ave. 1901.

OLD-TIME GARDENS NEWLY SET FORTH. By Alice Morse Earle. New York: The Macmillan Co.

APPLIED PERSPECTIVE FOR ARCHITECTS AND PAINTERS. By William P. P. Longfellow. Boston and New York: Houghton, Mifflin & Co. 1901.

GUIDE TO ITALY. London: Macmillan & Co., Limited. New York: The Macmillan Co.

FLORENTINE VILLAS. By Janet Ross. With reproductions in photogravure from Zocchi's etchings and many line drawings of the villas by Nelly Erichsen. London: J. M. Dent & Co. New York: Dutton & Co. 1901.

FORMAL GARDENS IN ENGLAND AND SCOTLAND. By H. Inigo Triggs. London: B. T. Batsford. New York: Charles Scribner's Sons.

A HISTORY OF ARCHITECTURE ON THE COMPARATIVE METHOD, Etc. By Professor Banister Fletcher, F. R. I. B. A., and Banister F. Fletcher, A. R. I. B. A. Fourth edition. Revised and enlarged. London: B. T. Batsford. New York: Charles Scribner's Sons.

THE DESTRUCTION OF ANCIENT ROME. A Sketch of the History of the Monuments. By Rodolfo Lanciani. New York: The Macmillan Co. 1901.

MUNICIPAL ENGINEERING AND SANITATION. By M. N. Baker, Ph.B., C. E. New York: The Macmillan Co. 1902.

SMOLEY'S TABLES. Containing Parallel Tables of Logarithms and Squares of Feet, Inches and Fraction of Inches, etc. By Constantine Smoley, C. E. New York: The Engineering News Publishing Co., 220 Broadway.

THE PAVEMENT MASTERS OF SIENA (1369—1562). By Robert H. Hobart Cust, M. A. London: George Bell & Sons. 1901. New York: The Macmillan Co. $2.00. (Handbooks of the Great Craftsmen.)

FILIPPO DI SER BRUNELLESCO. By Leader Scott. London: George Bell & Sons. 1901. New York: The Macmillan Co.

The
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AN INTERVIEW ON "L'ART NOUVEAU" WITH ALEXANDRE CHARPENTIER.

By Gabriel Mourey.

HERE is much to be said on what is called l'Art Nouveau—let us accept this name, seeing that everyone uses it. No question is more complex, either from an artistic or from a social point of view, and those who possess well-defined ideas about it find a difficulty in formulating them, constrained as they are to resort to the current vocabulary of art, of which many expressions have ceased to have any meaning.

Certainly, the ancients were not wrong in considering that the creation and the decoration of a common object was an art in no way inferior to pure architecture, painting and sculpture; and the artisans and artists who think as they did are, in my opinion, on the right track. Unfortunately, they remain, these artisans and these artists, the slaves of tradition, fettered by old rules; they labor painfully to express the dreams, the feelings, the ideals and the religion, of the men of the century of steam and of the telephone—the contemporaries of Darwin, Pasteur, and Edison—according to formulae, which date back a good number of centuries before the Christian era. The face of the world has undergone more change during the last hundred years than it underwent during the eighteen previous centuries, which have brought humanity to the threshold of the nineteenth century. Everything has been transformed except art and the modes of expressing it. Taine was right when he said: "To change the idea of such a general thing as form, what a change must take place in the human brain!"

This change is taking place. Here and there, in every country, men with willing minds are endeavoring to hasten it. Will they succeed? Why not? What right have we to fix limits to human progress? And even if we had enough foolish pride to do so, would that prevent what is destined to happen from coming to pass.

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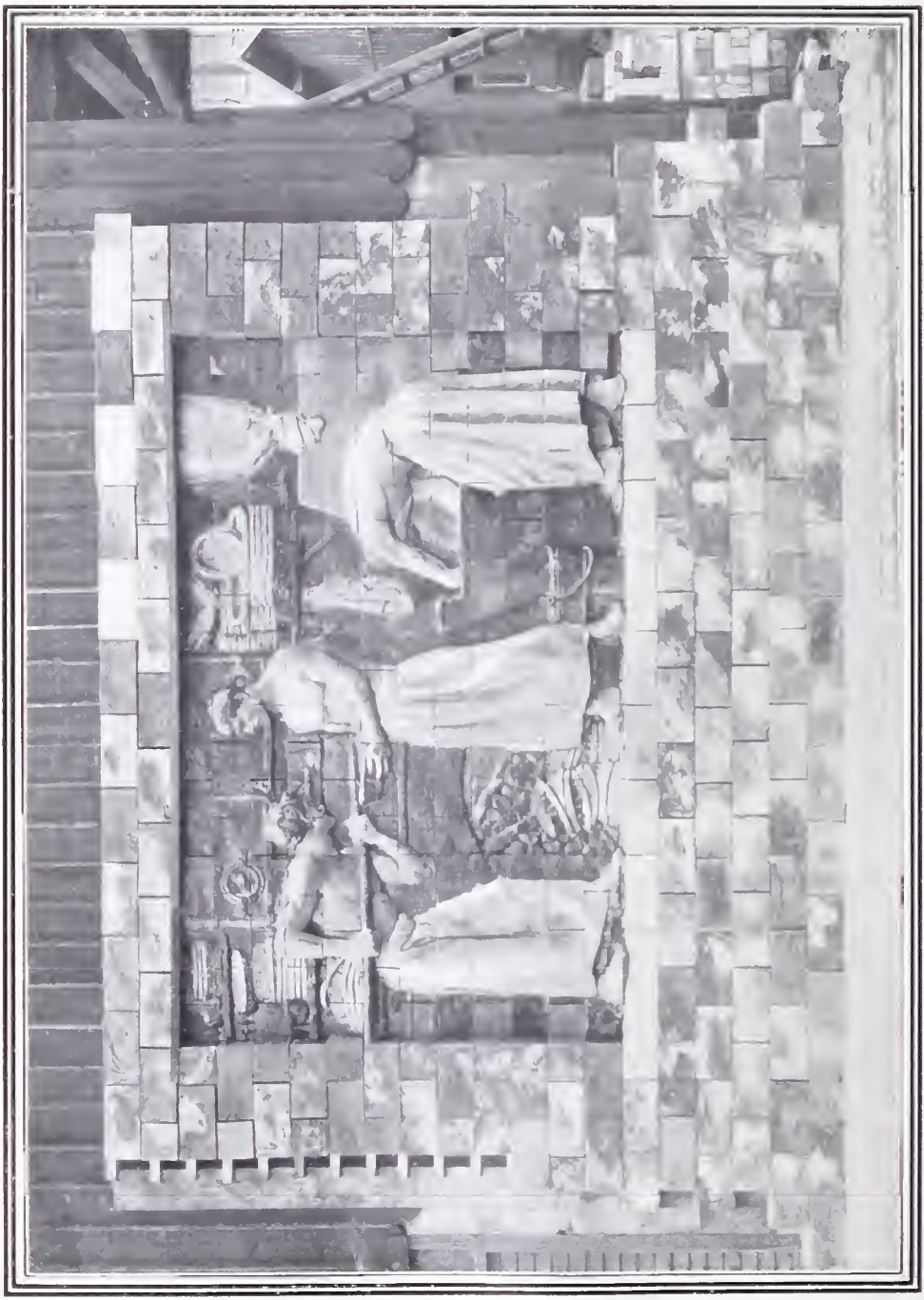


FIG. 1. THE BAKERS, NOW IN THE GROUNDS OF ST. GERMAIN DES PRÉS, PARIS, BY ALEXANDRE CHARPENTIER.

If what is called, rightly or wrongly, a style, has not, in Art Nouveau, been discovered up to the present, it is because there is too much indecision, as yet, both in our customs and in our minds; it is because the new humanity has not yet settled down into its right place; it is because it still vacillates, and because it has not yet acquired scientific certainty. The artists of the middle ages had religious certainty; they have filled our old Europe with perfect masterpieces. We shall never know that community of enthusiasm and faith in the ideal which vivified the souls of the men of those

FIG. 2. PLASTER CAST, BY ALEXANDRE CHARPENTIER.

days. In the absence of that, in contrast to that, it is in individualism *à outrance*, in anarchy—or better, in anarchism—that the artists of to-morrow will realize what they have in them and how noble is their mission.

What will the art of future centuries be like? We can scarcely form any idea. At any rate, a time will certainly come when painting and sculpture, as they exist to-day, will exist no longer. This art may not find its inspiration in natural forms; at least, I do not believe it will. This art will create new and unsuspected relation-

FIG. 3. MONUMENT TO CHARLET. PLACE D'ENFERT ROCHEREAU, PARIS, BY ALEXANDRE CHARPENTIER.

ships between forms; in fact, it will create new forms, new lines, and new harmonies; it will be, as it were, the philosophic expression of that humanity which will have been its creator; it will be symbolical, but in quite a different manner from what it has been up to now, for it will exist upon living symbols.

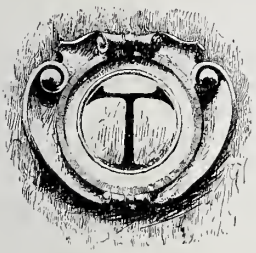
But if it is well to abandon the formulae of the past, all the mythological and religious *bric-à-brac* of dead epochs, which no longer have any meaning either for our minds or for our feelings, on the other hand we shall have to study with the greatest attention the working methods of the primitive artists of all periods—those of old China as well as those of old Egypt, those of old Asia as well as those of old Europe. The primitive artists were ignorant beings, the real *naifs*, the really sincere, in fact they were the people. They know nothing and yet they know everything; they are creatures of intuition and of suggestion, and I stand for them against the school, against the rules, against the formulae. Alone, also, the primitives have had respect for their materials; they have not practiced art for art, they have always treated stone, metal, earth, enamel, glass, wood, marble, as each of these substances should be treated. The art of the future, therefore, will be popular art, "Art made for the people, by the people," as William Morris has said.

Now it is not, in my opinion, from an old soil, exhausted by many centuries of intense cultivation, that this art, such as I delight to imagine it, will germinate; but from a fresh soil, whose strength has not been extracted, from a country where a heritage of prejudices and traditions does not hinder man's free advance along the road of progress.

But, liberated as this art shall be, and seeking as it will, its inspiration within itself and in the medium from which it shall spring forth; however complete its individuality may be, and totally as its form may differ from the art of the past, this art will not be at all positivist; and if it reflects the aspirations, hopes, ideas and passions of the democracy which will have lifted its bright colored standard in the sunshine, it will only remain the more nobly idealist and the more symbolical of a life more beautiful, more harmonious and more intense.

FIG. 4. HECTOR GUIMARD.
(See article, page 127.)

AN ARCHITECT'S OPINION OF "L'ART NOUVEAU."



HE ARCHITECTURAL RECORD has done me the honor of asking me to define "l'Art Nouveau." It is difficult, at a time of transition—I might almost add, of trouble and commotion—to state exactly what would be the best solution of a given problem; but it may be said that the close of the nineteenth century witnessed the beginnings of a general evolution which is destined some day to give tangible and permanent results, and art has shared in this movement. During the past twenty years or so, various attempts at modern art have been made, in a more or less timid way; and these attempts have been based on the interpretation of the elements of the flower. I will cite, in this connection: in France, Rubrick Robert and the Union Centrale des Arts Décoratifs de Paris; in England, Ruskin, Walter Crane and Morris; and in Belgium, Victor Horta. In the last-named country the decorative base is no longer the leaf and the flower, but simply the stem.

Returning to a sound logical view of the matter, and abandoning the ostracism of all the classical schools, it is my belief that, by studying the principles of art which have guided artists from the very earliest period down to the present day, it is possible to make a selection, and that if we will take the trouble to find out how our predecessors managed to discover them, we can by applying the same method to the conditions prevailing in our own times, deduce therefrom the proper modern rules. In spite of the profusion of old examples, it cannot be denied that there exists something else, and this "something else" should be the main object of the researches of those who want to work for their epoch. It is upon us architects that falls more particularly the duty of determining, by our art, not only the artistic, but also the civilizing and scientific evolution of our time.

Nature is a big book from which we can draw inspiration, and it is in that book that we must look for principles, which, when found, have to be defined and applied by the human mind according to human needs. From this study I obtain three principles which should have a predominating influence in all architectural productions, viz.:

1. Logic, which consists in taking into account all the conditions of the case, and they are infinite in variety and number, which the architect has to deal with.

FIG. 5. MANTELPIECE AND WOODWORK DECORATION, BY ALEXANDRE CHARPENTIER.

FIG. 6. CLOCK AND BRONZE. THE FLIGHT OF TIME, BY ALEXANDRE CHARPENTIER.

FIG. 7. FOUNTAIN, BY ALEXANDRE CHARPENTIER; NOW IN MUSÉE GALLIERA, PARIS.

2. Harmony, which means putting the constructions into full accord, not only with the requirements to be met and the funds available, but also with the surroundings.

3. Sentiment, which, partaking at the same time of logic and harmony, is the complement of both, and leads by emotion, to the highest expression of the art.

These are the principles which I have desired to exemplify in all my edifices, and particularly in the Castel Béranger, the Humbert de Romans Hall, and the stations of the Paris Metropolitan Railroad. It is these works, together with those of such men as Victor Horta and Van de Velde, which have inspired (chiefly in Germany, Austria and France) those productions described by the term "Art Nouveau." Unfortunately, I cannot say that all these productions illustrate the three principles which I have just laid down. For the most part they infringe them, for that undefinable thing called *taste*, which makes us like a chair, a clock, a vase or a jewel; taste, which is the embodiment of *esprit*, charm, emotion, life, whether in cloth or metal, an article for use or an ornament, is a quality which is lacking in the greater number of those who believe themselves to be modern creators, who in reality plagiarize more or less a motive made to ornament a necessary structure.

Fig. 8. Table, by Alexandre Charpentier.

Every great epoch has had a stylization of art. It is thus that all the styles which have preceded us came into existence, and it cannot be disputed that we are witnessing at present the creation of a style; but individual influences cannot have a universal effect. A style of architecture, in order to be true, must be the product of the soil where it exists and of the period which needs it. The principles of the middle ages and those of the nineteenth century, added to my doctrine, should supply us with a foundation for a French Renaissance and an entirely new style. Let the Belgians, the Germans and the English evolve for themselves a national art, and assuredly in so doing they will perform a true, sound and useful work.

Although it may be a daring thing for me to speak of the Ameri-

FIG. 9. MEDALS, TRADE MARKS, ETC., BY ALEXANDRE CHARPENTIER.

cans, who are so generously extending to me their hospitality in your review, I will venture to say that my American confrères have been, and are still, in the most favorable position for creating an "Art Nouveau." I am sorry that they have not thought proper to strive after a national art, evolved from their own temperament; that is, an art produced on the spot and instinct with the life of that spot. The artist does not create his environment; he is the product thereof. When I see your monuments and your architecture, I think I am again looking at that of the houses and monuments of Paris, of Berlin, or of Italy, so utter is the lack of all special mark of the soil.

FIG. 10. BRONZE CUP, BY VALLGREN.

Seeing that the "Art Nouveau" is now crossing the Atlantic to your shores, I hope that my American confrères will not rest content to be mere copyists, but will be creators, and it is my belief that the principles by which I am guided in producing French architecture would enable them just as easily to create an American art, a thing which your leading fellow-countrymen ardently wish to see.

Hector Guimard.

FIG. 11. CUPBOARD FOR HOLDING A QUARTETTE OF STRINGED INSTRUMENTS, DESIGNED BY A. CHARPENTIER. The body is of French yoke-elm, the paneling of Hungarian ash. These woods are of a light, creamy color, and are well-grained.

THE NEW WORLD AND THE NEW ART.

WHILE the 19th century was in no branches of art, except those of music and poetry, a century of memorable achievement, still, so far as painting and sculpture was concerned, it left behind it a great deal of work which broke new ground and which possesses both beauty and significance. It was only in the arts possessing a basis in utility that it made a palpable and a flagrant failure. The architectural, decorative and industrial art of the century was wholly and often stupidly imitative, lacking either the power to modify the older forms so as to give them a new application and atmosphere, or the rarer power of originating a novel and appropriate style. As the century was gathering to its end men became increasing conscious of this deficiency, and out of this consciousness issued a number of serious efforts to renew and invigorate at least some of these utilitarian arts. The most conspicuous and in a way the most successful of these efforts was that of William Morris and his school, which sought to obtain both beauty and sincerity of design by going back to the time in which many of the industrial arts were most flourishing, viz.: the Middle Ages, and by reviving not only Mediaeval technical methods and forms, but something also of the Mediaeval social and artistic spirit. This is not the place in which to pass a judgment upon either the motives of the Morris school or its work. Suffice it that, notable as were its achievements, it not only remained imitative, but it never threw off the limitations of a clique of craftsmen. Its work remained exotic, unpopular, over-elaborate and incongrous with the needs, the sympathies and the ideas of the 19th century. But it had the advantage of making men think and experiment along new lines, and if the work hitherto produced by these later experimentalists has frequently been inferior in quality to that of the Morris school, yet it had at least the merit of a more genuine initiative. Be that as it may, the "New Art" certainly came into being through an attempt, in itself dangerous, on the part of designers influenced by Morris and his co-workers to make their work more decisively and thoroughly original—to divorce it entirely, so far as possible, from traditional forms, which throughout the 19th century had been the death rather than the life of the arts and crafts.

Particularly during the past five or six years the "New Art" has been winning many adherents in France, Belgium, Germany and Italy, and whatever may be thought of the quality of its achievements, the quantity thereof is undoubtedly reaching very formid-

FIG. 12. A LATERAL COMPARTMENT OF THE CUPBOARD FOR STRINGED INSTRUMENTS, DESIGNED BY ALEXANDRE CHARPENTIER.

able dimensions. The art periodicals, published in Continental Europe are filled with the newest examples of the "new art"; and, indeed, some of them contain little else. There is being held in Turin this summer an exhibition of modern decorative art, which is intended primarily to expose the achievements of the new school. There seems to be no doubt that for the time being it is the dominant influence, if not in European architecture, at least in the interior decorative arts of continental Europe.

Yet, in spite of the large and increasing quantities of "New Art," which the French and German secessionist designers are committing—it is by no means easy to find a formula, which defines the purposes of the "new" artists. Particularly in this country, one hears the question continually asked "What is this Art Nouveau? Is it anything more dignified than a mere revolt against traditional architectural and decorative forms? What positive and formative influences are there behind it, and what new technical discipline and motives does it offer?" And back of these questions can always be discerned a suspicion that the "New Art" is only one of many expressions of "fin de siècle" sensationalism, which tries to whip jaded sensibility into new life by violent stimulation, and which authorizes any departures from traditional motives, however bizarre, formless and even ugly, provided only that they are piquant and impertinent.

That at one time these prejudices were in some measure justified there can be no doubt, and there is much in the contemporary work of the new school, of which the hard words used above are not an unjust description. Still there are among the "new" artists both in France and Germany some sincere and very skillful designers, who are really seeking to lay the foundations of a new style, and who believe that they have attained some success. In the case of an experimental and extremely conscious effort of this kind, it is always much more interesting to obtain the ideas of the men, who are actually doing the work, than that of those who are only looking on from without; and with this purpose in view the Architectural Record has secured an expression of opinion about the motives and the meaning of the "New Art" movement from M. Hector Guimard and M. Alexandre Charpentier—the former one of the most successful architects the movement has produced, and the latter an original, versatile, and very conscientious sculptor and general designer.

While insisting emphatically upon the negative aspect of the movement, viz.: the uncompromising revolt against the mere copying of conventional forms—both of these artists believe that it has behind it a genuine formative impulse and intelligible technical motives. They naturally associate this impulse with the

FIG. 13. BAS RELIEF IN A LATERAL COMPARTMENT OF THE CUPBOARD FOR STRINGED INSTRUMENTS, DESIGNED IN GILT BRONZE BY ALEXANDRE CHARPENTIER.

spirit and needs of contemporary life, and somewhat vaguely refer to science and democracy as offering that basis of intellectual certainty and communicative social feeling, without which no positive style in art seems possible. They both admit that the achievements of the "new" artists are in some respects very unsatisfactory. M. Guimard states that much of the work, which issues from the new school, not only fails to embody his own formative "principles," but that it is frequently chargeable with the heinous fault of being in bad taste; and this judgment the majority of American critics will not be inclined to dispute. Mr. Charpentier believes that, while the new artists are laboring to give birth to something which can really be called a new style, still they have not done much more so far than to substitute a new anarchy for the old one; but he prefers and rightly prefers an anarchy that is redeemed by a serious effort after a living art to an anarchy of imitation. These admissions on the part of Messrs. Guimard and Charpentier pretty well cover the current objections to the "new art"—the objections, viz.: that it both fails frequently to phase a well-trained taste and that it has failed as yet to originate any forms, which have been and deserve to be recognized and adopted. The difference that would remain between Messrs. Guimard and Charpentier and the American critics of the movement would be a difference in point of view as to the need of the revolt, and as to the life which remains to be elicited from the traditional forms.

When they come to define what the forms and guiding traditions of the "new art" are Messrs. Guimard and Charpentier are not in complete agreement. The former speaks approvingly of the attempt to "interpret the elements of the flower" which informed the work both of the school of William Morris and of his contemporaries in France and Belgium; and he believes that from a study of nature can be deduced principles which should have a predominating influence—at least in the department of architecture. M. Charpentier, on the other hand, rejects the study of nature as the source from which the "New Art" may derive its salient and guiding forms. He would go back, not to nature herself, but to the primitive, the really "naifs" interpretations of nature. Both of these conflicting counsels are somewhat vague; but as that M. Guimard is more definite, and since he applies his principles peculiarly to architecture, they may be considered more in detail. By his first two principles, Logic and Harmony, M. Guinard evidently has in mind that rational and moral renovation of architectural practice, for which critics have long been crying, but crying in vain. He seeks, that is, to give completeness and integrity at once to the structure, the design, and the ornament of buildings; to the end that inside and out they shall be frankly ex-

FIG. 14. BAS RELIEF IN A LATERAL COMPARTMENT OF THE CUPBOARD FOR STRINGED INSTRUMENTS, DESIGNED IN GILT BRONZE BY ALEXANDRE CHARPENTIER.

FIG. 15. BAS RELIEF OF A DANCING GIRL IN A LATERAL COMPARTMENT OF THE CUPBOARD FOR STRINGED INSTRUMENTS, DESIGNED BY ALEXANDRE CHARPENTIER.

FIG. 16. BAS RELIEF OF A DANCING GIRL IN A LATERAL COMPARTMENT OF THE CUPBOARD FOR STRINGED INSTRUMENTS. DESIGNED BY ALEXANDRE CHARPENTIER.

pressive of the materials of which they are built, the structural principles, which they embody, and the purposes for which they are used. But this is not all. By this third principle, that of "sentiment," he proposes that the "new" architecture shall not only be logical and sincere, but that there shall be born out of this

FIG. 17 BRONZE CUP, BY VALLGREN.

completeness and sincerity a monumental and atmospheric style of building—something that shall awaken popular feeling by a revival of the former vital relationship between architecture and life. These principles have, as I have already intimated, characterized the criticism, if not the practice of architecture at least since

FIG. 18. PLACQUE. BY ALEXANDRE CHARPENTIER.

FIG. 19. PLACQUE. BY ALEXANDRE CHARPENTIER.

the early writing of Ruskin; and, however little they may be accepted by architects, they will of themselves not arouse much opposition among commentators on that art. But what a good many critics will be inclined to question, is whether the "new" architecture actually embodies these principles, and whether, however, honest and sincere it may seek to be, the aesthetic merit of the work, its apparent power of being permanently pleasing, is at all as conspicuous as its evident and intentional oddity. Moreover, apart from the work of some of the more prominent designers, it is not easy to find evidences even of sincerity in much of the work, which calls itself "Art Nouveau," for sincerity is hardly compatible with such tiresome and impudent attempts to be conspicuous at any price.

But leaving principles aside I should say from my own impressions of "Art Nouveau" that perhaps its most salient technical motive was a noticeable liking for continuity of line. This tendency prevails at once in the architectural forms used, in those connected with interior decoration, in its furniture, and in its metal work. Many influences seem to have contributed to make this motive dominant. In the first place the rejection of classical models, which is the life of the whole movement necessarily involved a departure from the rectangular and geometrical forms, so characteristic of classicism of all kinds. In the second place "Art Nouveau" has, of course, been much influenced by the adoption of the leaf, the flower, and the stem as the decorative base of the work of the Morris school; and horticultural models naturally limit designers to continuous as opposed to broken lines. In the third place it is apparent that some at least of the "new" secessionist artists are much under the spell of Japanese originals, which, it is unnecessary to say, possesses a dominant tendency in the same direction. Finally, it is also evident that many of the "new" designers in Germany have merely substituted late Mediaeval models for those of the neo-classic masters—models which both in architecture and decoration have a noticeable disposition toward lineal continuity. The mention, moreover, of Mediaeval and Japanese models leads to the remark that there is an apparent mental affinity between the incidental and fanciful character of Japanese and late Mediaeval art, and the restless search for the novel and the unusual, which lies at the roots of "Art Nouveau," and this very search for the novel has undoubtedly kept the work of the new art, so chaotic in form and so anarchical in temper that it is almost impossible to distinguish and describe any general tendency.

While Messrs. Charpentier and Guimard do not agree upon the technical and stylistic basis of the "new" art, there is one point

FIG. 20. STANDARD, BY ALEXANDRE CHARPENTIER.

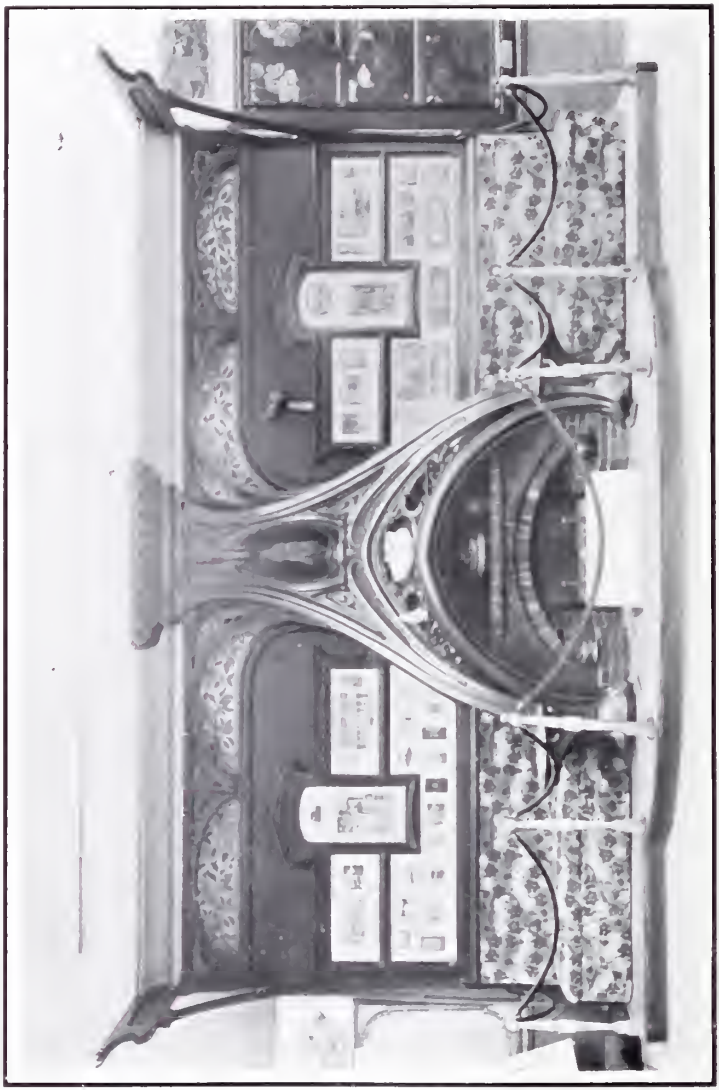


FIG. 21. FIREPLACE, WITH SEATS.

on which their opinions perfectly coincide. They both emphatically state their belief that the proper home of the "New Art" is the new world; and one of them goes so far as to say that it can never really flourish anywhere else. Yet they both also realize that hitherto American designers have regarded the new movement with suspicion, and have not allowed it any appreciable influence upon their own work. So far from shunning traditional motives and imitative methods the average American designer is trying to steep himself in traditional forms. He glories in them; he even riots in them. His art frequently seems to be a systematic effort to Europeanize the new world, to make it reminiscent of the times when style in art came naturally to men, and did not need either to be manufactured, borrowed, or eschewed.

Which is nearer right in this matter? American practice, or these French opinions as to what is aesthetically desirable in a new country? Well; for my own part, I believe that the instinct of our local designers is a justifiable instinct—no matter how unfortunate some of the results of it are. Messrs. Guimard and Charpentier have been deceived into believing that the new world needs an art correspondingly energetic and modern. But in truth, the case is precisely the opposite. The old world may or may not need a new art, which violently breaks away from established forms, but the new world certainly needs in the beginning an old art, in which those forms are not only preserved, but cherished.

For in this country all art, however old in its origin, is in a very real sense new; and before embarking on a revolt against established forms, the establishment of some forms against which to revolt is a not unreasonable precaution. Europe stands at one point in the history of its aesthetic culture; the United States stands at another. American designers study abroad and are profoundly influenced particularly by French practice, but the kind of work they do in this country is necessarily determined by the stage, which has been reached in American aesthetic development. For however much a foreign art is studied abroad, it must be reproduced at home before it takes a natural and organic place in local aesthetic culture. American designers are now trying to materialize in this country the best available traditional models they can find; and in so doing they are taking the only sensible and practical way finally to reach America in aesthetic independence. There could be no better indication of helpless intellectual servility and aesthetic incompetence on the part of American artists, than the attempt to borrow, not traditional forms which can in time be naturalized, but intellectual needs and standards which at any particular time must be in large measure the product of local conditions. What American

FIG. 22. WRITING DESK, DESIGNED BY DAMPT.

art needs most of all at present is the informing and refining presence of the best European models, so that it may start upon its career with a solid ground of safe, if not of brilliant achievement. The intentional striving after originality is always a dangerous thing; but considering the absence in this country of corrective traditions it would be fatal to American artists, and would result in aesthetic extravagances, compared to which Whitman's experiments in verification might seem normal.

It is, indeed, impossible to defend present American practice all along the line. That local architects and decorators should appropriate and copy foreign models is all very well; but the reproduction is for the most part altogether too faithful. It is as often as not the result of being either too lazy or too busy to undertake the work of proper modification or even of intelligent imitation. The prominent American designers have for the most part more work in their offices than they are able conscientiously to supervise, so they naturally fall back upon the excellent manufacturing method of "standardizing" their products—methods absolutely fatal to aesthetic originality and distinction. And so American artists are always tossed on the horns either of one dilemma or another. Either they adapt themselves to business conditions and compromise the integrity of their work or they are forced aside and continue to work conscientiously along their own lines, and are "good but lonely."

This tendency in the direction of wholesale and servile copying is the more disastrous, because the imitative basis of American architecture and decoration can only be justified ultimately on the ground that the traditional forms adopted will be modified to suit American needs, manner of living, and aesthetic temper. But of course, it is altogether too soon to assert that the gradual and appropriate modifications will not eventually be made. It took France some centuries to naturalize Italian Renaissance architecture, painting and sculpture, and even in our faster moving period, we may well leave American architects and decorations the space of two or three generations to see what they can accomplish. There is a good chance that they will be able to modernize and Americanize the old forms and materials. An art that begins by copying may end by being vigorously independent. The difference between imitation and originality does not run at all as deep as was once supposed; and the more we know of the history of civilization, the more it is realized how profoundly important a part has been played in it by imitation. A prominent French psychologist goes so far, indeed, as to make the faculty of imitation the primary fact of social psychology. Whether in any particular case ideas and forms which have been taken over by imitation become

FIG. 23. ARM CHAIR FOR CHILDREN, BY DAMPT.

fruitful depends entirely upon the interest which they arouse and the sacrifices, which are made on their behalf. Rome took over Greek culture without, except certain particulars, ever really assimilating it, because Rome was primarily interested in politics and did not take anything else very seriously. If the United States continues to be primarily interested in business and does not take anything else very seriously, she will in the end assume very much the same position toward Europe as the Greek colonies in Sicily did toward their native Greece; she will exchange her material products for the art and thought of the motherland. But there are the best reasons for believing that the American national life and character is too vigorous, too broad, too independent and too generous to submit to a one-sided and merely commercial growth. What the United States needs is a nationalization of their intellectual life comparable to the nationalizing, now under way, of their industry and politics; and in the fullness of time American culture will be invigorated and informed by the same enterprising and coöperative spirit which has distinguished its industrial successes.

Herbert Croly.

TWO DOOR KNOBS, BY ALEXANDRE CHARPENTIER.

THE BOURSE, PARIS.

HOUSE OF

HENRY W. POOR

TUXEDO, N. Y.

T. HENRY RANDALL, Architect

FIG. 1. THE FACADE OF THE HOUSE AS SEEN FROM THE GARDEN.
Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 2. THE HOUSE AS APPROACHED FROM THE DRIVEWAY.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 3. THE ENTRANCE FROM THE DRIVEWAY.
Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 4. THE UPPER AND THE LOWER GARDEN.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 5. A STAIRWAY IN THE GARDEN

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

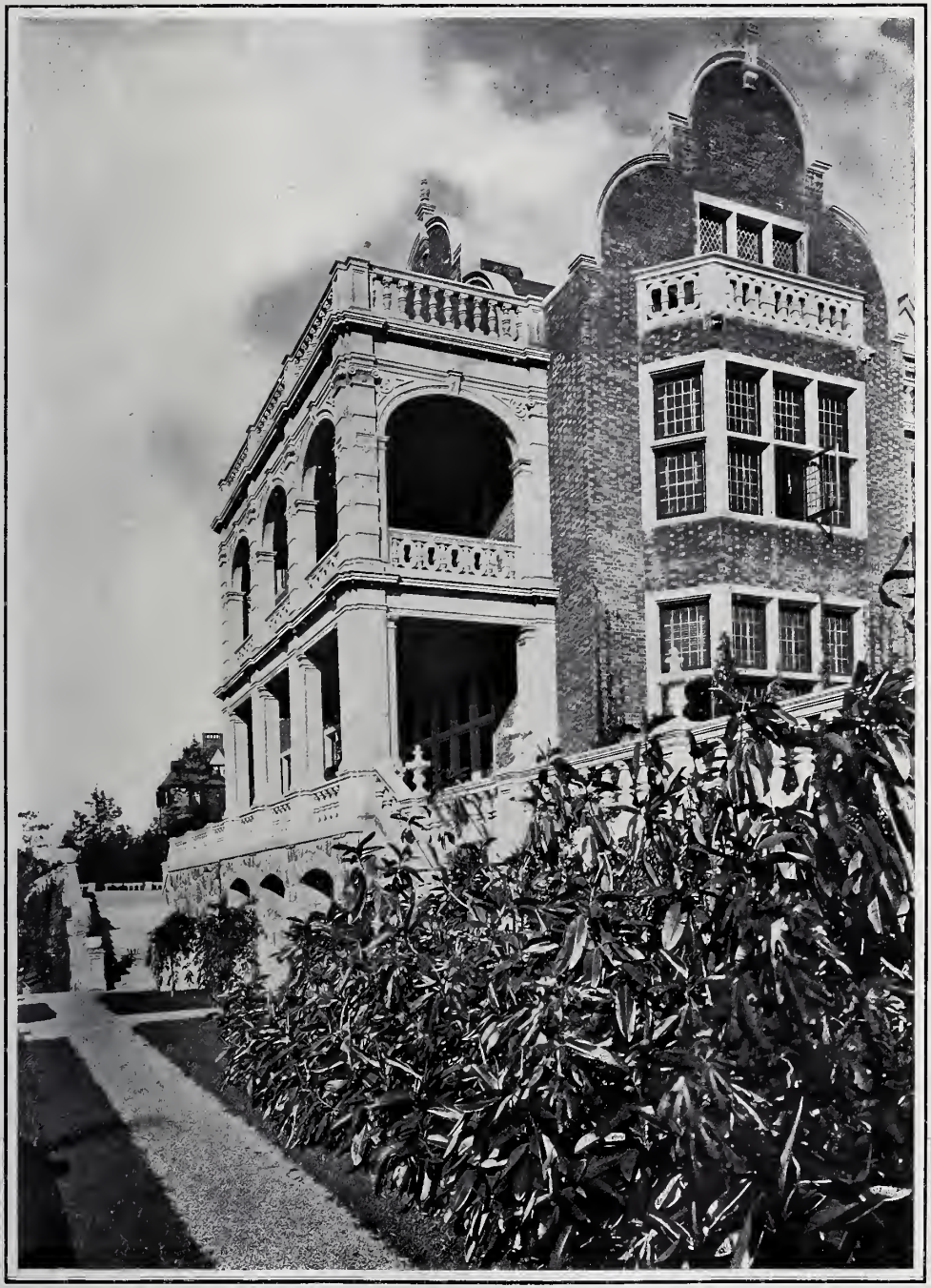


FIG. 6. THE PORCH, OVERLOOKING THE RIVER, AS IT APPEARS FROM WITHOUT.
Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

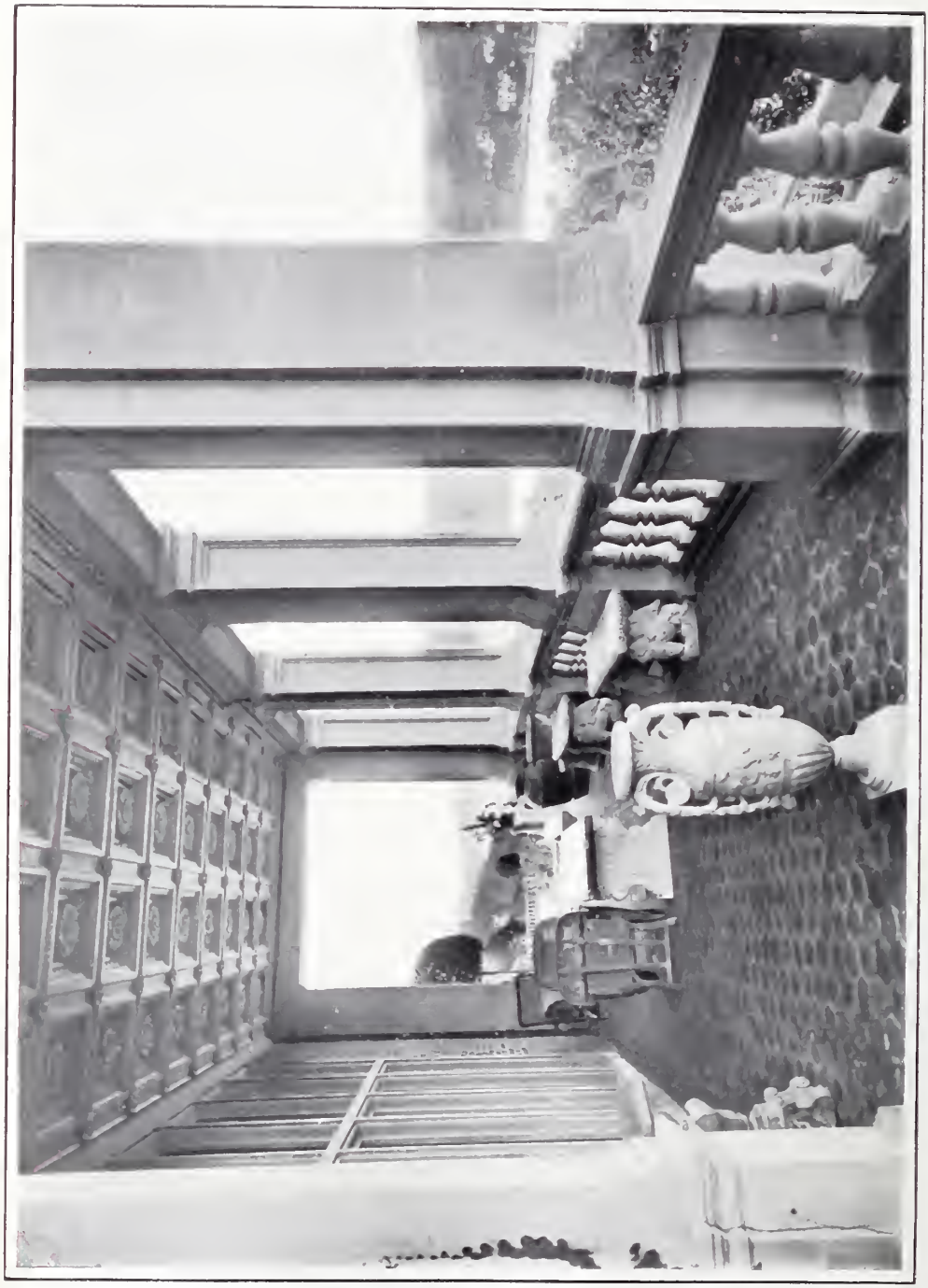


FIG. 7. THE PORCH, OVERLOOKING THE RIVER

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 8. THE HALLWAY.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 9. THE STAIRWAY.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 10. THE GALLERY.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 11. THE DRAWING ROOM.

Residence of Mr. Henry W. Poor, at Tuxedo. N. Y. T. Henry Randall, Architect.

FIG. 12. THE SMOKING ROOM.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

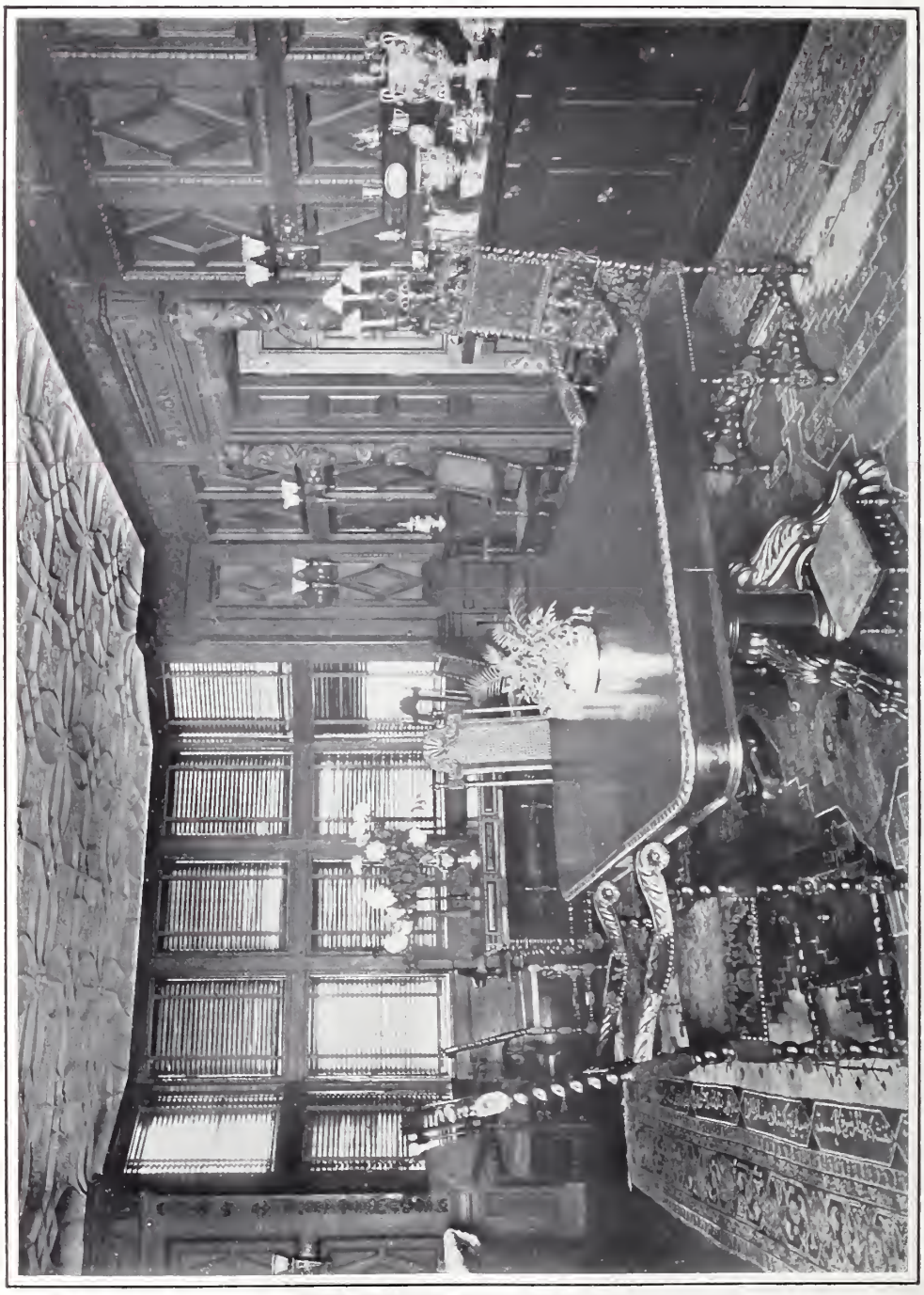


FIG. 13. THE DINING ROOM.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 14. THE MANTELPIECE IN THE DINING ROOM.
Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 15. A BEDROOM.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 16. A BEDROOM.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 17. A BEDROOM.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

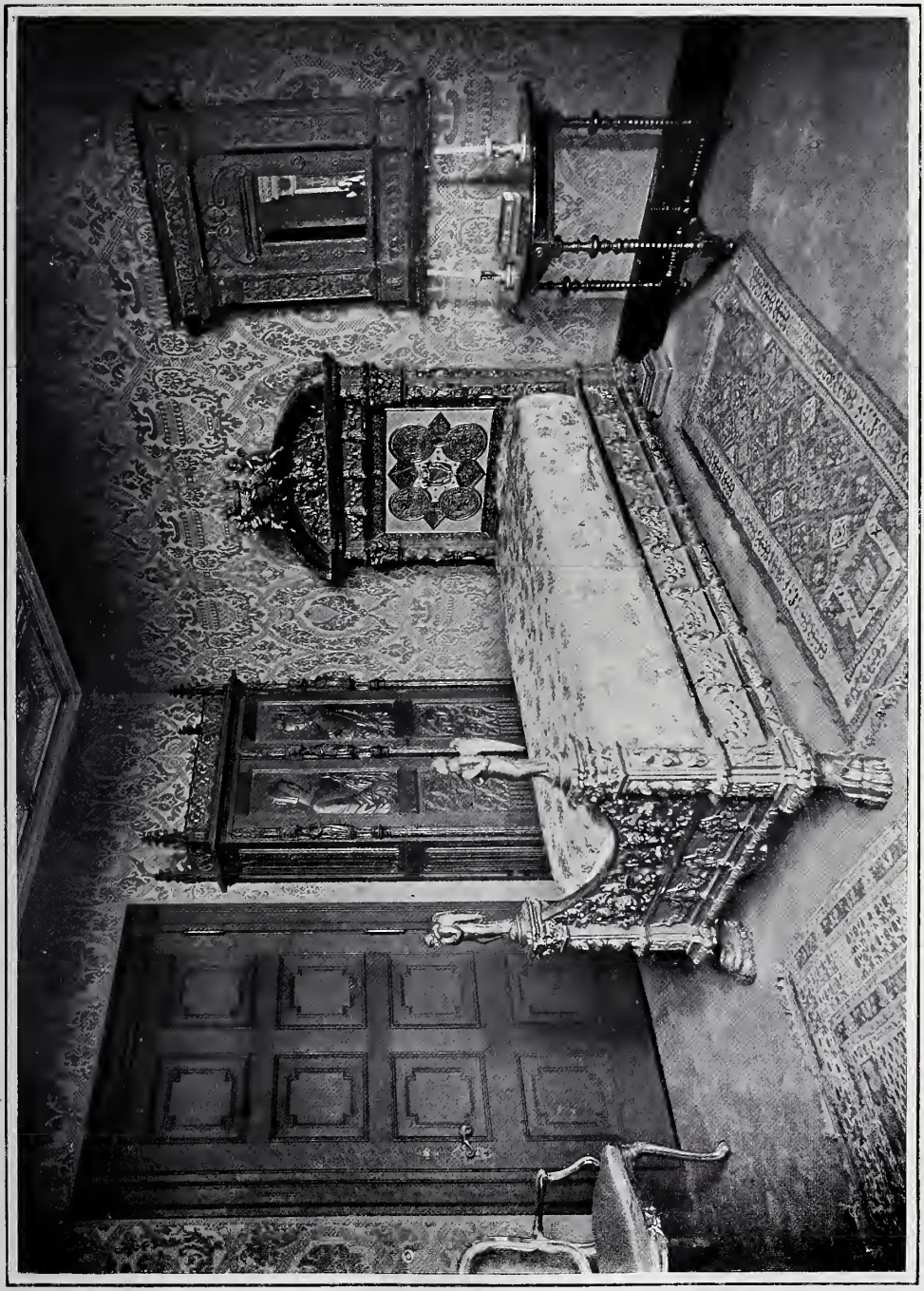


FIG. 18. BEDROOM.

Residence of Mr. Henry W. Poor, at Tuxedo, N. Y. T. Henry Randall, Architect.

FIG. 1. A FORMAL GARDEN IN NEW JERSEY.

Planting in Landscape Architecture, and especially in formal gardening, has but one value—namely, to emphasize the design. The richness and value of a plant should correspond with the importance and prominence of the various compartments, points of departure and of approach of the general scheme—in a gradation similar to the interior decoration of a house. The two solitaire poplars, shown in the reprint above, are doubly attractive; first, in the strong contrast between their formal character and setting, and their irregular background; and, second, because they are indicative of the almost hidden flight of steps seen in their perspective.

THE FORMAL AND NATURAL STYLE.

THE present revival of the formal gardens, or the formal style of gardening, is a reaction from the over-appreciative enthusiasm which has prevailed during the latter part of the eighteenth century and after for the romantic or natural style. This was but one phase of the interest in romanticism, which then affected both art and literature, and which not only exaggerated the extravagances of the formal style, but led to absurdities in the natural style. Owing to the revived interest at the present time in the formal, and the decreased interest in the natural style of gardening, it should not be difficult, with the calm that comes with the lapse of time, to assign to each its respective merits. The two styles are diametrically opposed in principle. The more each is perfected, the more will they differ. It is not unreasonable to suppose that the conditions to which each is adapted, are also diametrically opposed. The natural style has practically usurped the entire field of garden art, both under conditions to which it is adapted, and under conditions to which it is utterly unfitted. The purpose of this essay is to point out what conditions are adapted to the natural style, and what to the formal style. Our question is then: What are the fundamenal principles of the natural style of gardening, and under what conditions can they be advantageously realized?

The discovery that landscapes are "gardenesque" was accredited to the natural style. It was thus dramatically described by Walpole: "Kent leapt upon a wall, and discovered that all nature was a garden." And thus with a leap, are we introduced to the most radical departure from the formal style. From a few acres, at most, walled off from external gaze (as all gardens are), the

FIG. 2.

This illustration and the next represent the same piece of ground. They are both representative of the natural style. The former exemplifies an ideal application of the principles, and the latter, the result commonly attained. Fig. 2 (Eschmann) shows how, by taking the existing conditions, a picturesque scene may be created. Every characteristic has been emphasized. The continuity of the surface contours have been broken, the shore line has been indented; large rocks have been introduced or exposed; nothing but native shrubs, trees, ferns and creepers have been planted; no paths are allowed to aid the stroller—he must find his way as best he can, as he would in native woods. It is consistent throughout.

FIG. 3.

The illustration represents a characteristic example of the large country estate, both in this country and in England, where the natural style originated. The grounds around the house and at a distance from it are each subjected to the same treatment, which is theoretically incorrect. All undergrowth is religiously grubbed up, all inequalities are ironed out. All rocks are buried or cast away. The entire surface is plowed and harrowed and raked and rolled and profusely sown with lawn seed. The boundaries are monotonously demarked by a multitude of cheap deciduous shrubs and trees, clumped in "picturesque order," while the centre portions of the lawn is bespotted with foreign "specimen plants." From house to boundaries, be the area one or one hundred acres, there is nothing but lawn, lawn, lawn.

ambition of the rival school was to include great expanses of landscape in their walless "gardens." The art of gardening henceforth became the "art of creating landscapes." In other words, gardening ceased to be an inventive and became an imitative art. "Its principles," Loudon says, " as an imitative art, were derived from nature, as developed by the principles of landscape painting." He says further it had "for its object the production of landscapes by the combinations of the actual materials of nature, as landscape painting has found for its object their imitation by combination of colors."

The object of the early masters was thus literally "to realize whatever the fancy of the painter has imagined." "The first requisite," Mason says, "necessary to form a just taste in landscape gardening, is a knowledge in landscape painting." "None should," Sir Uverdale Price also says, "presume to garden, who have not a previous knowledge of painting." Accordingly, the principles of the natural style were originally deduced from the works of such painters as Poussin, Claude, Gainsborough, Correggio and Salvator Rosa. In imitation of these painters, landscape scenery was divided into the Grand, the Picturesque, the Romantic, the Beautiful, and the Rural. Each style of landscape had its corresponding and appropriate style of architecture. A Grecian or Italian edifice for the beautiful; a castle for the grand and romantic; a hunting lodge for the picturesque; and a cottage ornée for the rural.

The above quotations show the inspiration to which the early naturalists turned for guidance; while the following will show it as formulated in general principles. Knight and Mason, Gilpin and Downing express what is generally recognized, both as to the results to be obtained and the primary requisites for the attainment of such results. Thus Mason gives expression to the following general rule, which is endorsed by the majority of writers, both early and modern:

> "When thy task is called
> To deck a scene where Nature's self presents
> All three distant graduations, then rejoice,
> As does the painter; and like him apply
> Thy colors; plant thou on each separate part
> Its proper foliage."

"I conceive," Mason further says, "that the primary disposition of nature should regulate, not be subservient to, artificial limitations, and that all rural scenery should be improved according to the manner suggested by itself, without regard to nominal distinction or systematic arrangement." Gilpin expresses the same general principle. "The judicious improvement of any place must rest upon the natural character of the place itself." Downing in

his book on landscape gardening thus defines the object of the natural school. "In landscape gardening we should aim to separate the accidental and strenuous in nature, and to preserve only the spirit, or essence. This subtle essence lies, we believe, in the expression more or less pervading every portion of nature. And it is eliciting, preserving, or *heightening* this expression that we may give our landscape gardens a higher charm than ever the polish of

FIG. 4. A MODERN VERSION.

To convert meadow-land into a highly cultivated lawn, when it has no proportional relation with the house, is no less incongruous than it would be to plant a formal bed of cultivated roses by the roadside. The "dressed" lawn should not extend further from the house, or beyond the formal garden if there be one, than does the "atmosphere" of the house extend; to do so is to lose the relation and proportion between lawn and house, and consequently the raison d'etre of the lawn. There is nothing more beautiful than the rich brown of meadow-land, sparkling with clover, daisies and buttercups; neither is there anything more insipidly monotonous than long unbroken reaches of dressed lawn. The line of demarkation between the two should be strongly emphasized, either by a hedge or fence or balustrade.

art can bestow." Downing further explains that lawn and trees are the essential elements of this style, and that while they may "be shown wherever a rood of grass surface, and a half-dozen trees are within our reach," it is essential in order that his art may appear to advantage to have considerable "extent of surface." This need of an extensive area for the advantageous expression of the natural style, is not only a necessary deduction from the general

FIG. 5. A COUNTRY PLACE IN NEW JERSEY.

Such a place as this lends itself to a delicate adjustment between the refinement of cultivation and the ruggedness of nature. The drive to the house, seen in the distance, follows the curvature of the land. The woodland to the left has been but slightly altered—in deference to the general character of the property. The meadow to the right has been converted into a highly cultivated lawn—in view of its proximity to the house. The estate is about ten acres, and throughout there has been attained a perfect balance of effects as well as a perfect proportion in quantity. It is the work of Samuel Parsons, Jr.

tenor of the principles above quoted, but it is further emphasized by a tendency, strikingly characteristic of the style, to obliterate all apparent limitations of boundaries; to create, if necessary, a fictitious impression of spaciousness. He recognizes, however, what few of his brother naturalists do, the incongruity of confining a "semblance of free nature" within narrow limits; especially where, in small estates of six to eight acres, the boundary lines cannot be concealed in the manner he advises below. For smaller areas he frankly admits that the conventional style is more suitable. Downing is the sanest exponent of the style in question; and he insists that it is necessary in the handling of small suburban lots to make them appear to be portions of a large and elegant estate. "To do this," he says, "the space allotted to various purposes . . . must be so characterized and divided by plantations, that the whole shall appear to be much larger than it really is." Henry E. Milner, the famous landscape gardener of England, offers the following original deductions for the "guidance of the landscape artist." "The idea of spaciousness," he says, " can be artificially promoted, particularly by the breaking of continuous lines and hard boundary lines, and by providing various objects for the eye to count, just outside of the lines of sight." "A gradation of colors may promote the idea of distance;" and again, "by directing the vision to distant beauties of landscape, they may be brought into the artist's plan." This last suggestion calls to mind a further important principle of the style in question. It is essential, says Downing, "that artificial lines of improvement should lose themselves indefinitely and unite agreeably and gradually with those of the surrounding country." Where it is impossible to exclude such artificial features as roads and paths, it becomes necessary so far as possible, to harmonize, as it were, these artificial necessities with natural laws. For as a leading advocate of this style says, "Roads and paths are it must be confessed, necessary evils that add no landscape beauty to the place, and must be tolerated because they are needed."

For the treatment of these artificial features Mr. Milner offers the following observation. "Nature seldom presents a straight line." "A straight line," he says, "is a product of art," while "nature presents in her broad effects and graduated detail, an infinity of curvilinear features." Avoidance of straight lines, and the constant use of curvilinear features is a striking characteristic of the natural style; indeed the excessive application of this "curving habit" justifies the remark of Mason, "By the turns of their winding walks, one should take them to be the footsteps of some reeling drundard!" Thus we are led to the conclusion that the ultimate object of the natural style of gardening is to reproduce

with as little artificiality as possible, the appearances of nature; that artistic expression, as such, is to be avoided; that self-effacement on the part of the artist is essential; and that, in fact, "nature," as Milner says, "must triumph over art."

The answer to the first part of our question, namely, "What are the fundamental principles of the natural style of gardening?" is now sufficiently indicated. We may, therefore, proceed to the

FIG. 6.

There is a style of gardening, of which the above is an example, that is not purely formal and is in no sense natural, but which borrows a charm from both. It is largely dependent upon existing conditions. It has a conventionalized symmetry and a balanced irregularity. Where the general design demands a sacrifice of original conditions, they must subtend this end, but this heightens the charm where some ancestral landmark has earned the right of continuance; the more so if the general scheme clearly indicates a decided preference for artistic ends.

second part, namely, "Under what conditions are they most advantageously realized?"

The natural style of gardening is so conditioned by its principles, and therefore by its possibilities, that its free development should have been continuous with, rather than antagonistic to the formal school. The two styles should never have clashed, inasmuch as they have nothing in common. However, there is a soul of good in every evil. From an evolutionary standpoint it was, at that time, necessary that a radical change in the developmental ten-

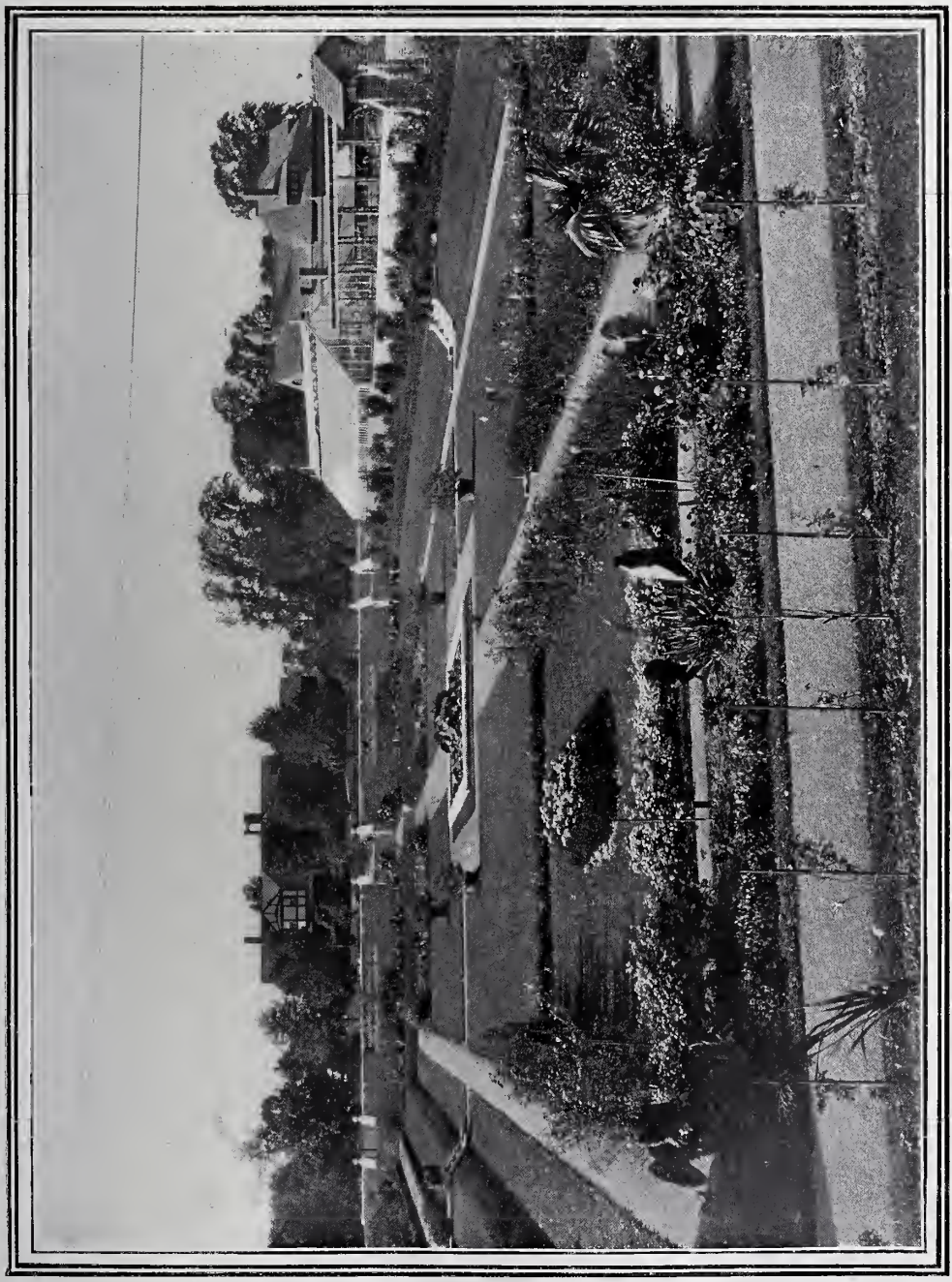


FIG. 7. THE GARDEN OF JOHN W. PEPPER, NEAR JENKINTOWN, PA.
Wilson Eyre, Jr., Architect.

FIG. 8. HOUSE AND GARDEN OF MR. B. BORIE, NEAR JENKINTOWN, PA.
Wilson Eyre, Jr., Architect.

FIG. 9. GARDEN OF THE DWELLING OF MR. B. BORIE, NEAR JENKINTOWN, PA.
Wilson Eyre, Jr., Architect.

dencies of the classical school should take place. It had reached its limits, and even, along certain lines, had passed them. The enthusiasm for the new style put an effectual stop to its progress along decadent lines. It was effaced and entombed by the "natural style." Its beauties, however, are reincarnated in the tendency of to-day. Its revival will be continued and its development guided by the spirit that has recalled it to life. But there is also a soul of evil in every good. The enthusiasm for the natural style has served its purpose, and it should no longer be allowed to usurp the legitimate domain and to repress the far greater artistic resources of the formal gardens. There is ample opportunity for the expression of both; and it should be the ambition of "the powers that be" to develop each style according to its individual merits.

The first requisite of the natural style has already been touched upon; namely, an extensive area. The Columbia Cyclopeadia thus refers to the point in question. "Much that is known as landscape gardening would more properly be called *decorative gardening*, as the word landscape involves a considerable range or distance of natural perspective unattainable in a limited garden." Here are two fundamental suggestions. First, the name "Natural School of Landscape Gardening" originated simultaneously with the birth of the style itself. It is entirely indicative, both of the principles and the object of the style. Its principles were derived from the art of landscape painting, and its object is to create compositions such as landscape painters would create were they confined to the same limitations. Now it is obvious that any artificial environment is foreign to the spirit of the natural style. Hence, the two essential qualifications for the perfection of the style are, first, a natural landscape basis, and a natural environment. And second, given the first conditions, the effect will be perfect in proportion to the extent of the area.

What, then constitutes an ideal natural landscape basis and a natural environment for the best expression of the natural style? The spirit of its principles is not constructive, but primarily substitutional. The ideal standard is derived from nature. Now, whereas the landscape painter is free to create any conception he deems best, the naturalist is doubly limited, because first, the basis of action is determined by existing conditions, and second, he cannot, upon this pre-determined basis, impose beauties of his free imagination. The most that he can do is to induce or emphasize the potential beauties already existing; that is, he may substitute such characteristics of natural picturesqueness or beauty as would have existed naturally, under ideal conditions. In other words, his possibilities are not primarily limited by his own genius, but by the possibilities of a given situation. The stream cannot rise above its source.

FIG. 10. HAMILTON PARK.

The character of this park-land is ideal for the natural mode of improvement. It is virgin woodland—hilly, rocky and thickly overgrown with trees and undergrowth, with open meadows and potential lakes. Save at the main entrances, formal treatment is negatived. The lines of traffic are determined by the contours—and are literally necessary evils. Rocky and bare hillsides, spots made unsightly by the devastations of time, and the ground laid bare by the grading necessitated by the introduction of roads and paths, should be renovated only by such plants as are indigenous to the land or harmonious with its character. To grub up all the natural undergrowth and replace it with nursery shrubs, to convert the meadows into polished "landscape" lawns, in fact, to rob the land of all its natural beauty, as is customary, is a questionable mode of improvement by the advocates of naturalistic theories.

This limitation was fully realized by Mason in his poem entitled "The English Garden:"

> "Great Nature scorns control; she will not bear
> One beauty foreign to the spot or soil,
> She gives thee to adorn; 'tis thine alone
> To mend, not change her features."

It goes without saying that an ideal landscape would call for no improvement at all; it also follows, therefore, that the landscape best adapted for the expression of the principles in question is such as requires the least amount of modification.

The constituents of a natural landscape consist in more or less abrupt irregularities of contour, in the projection of massive rocks or boulders, and in the accompanying dispositions of indigenous plant-growth. Except by planting, it is impossible to reproduce these characters by artificial construction, without reducing the system to an absurdity. Practically then the naturalistic improver is restricted to the management of planting. It is well recognized, and especially in this country, that any attempt to impose a "national" character upon a place by extensive grading, and yet to retain, as Milner says, " natural-like" appearance, is futile. Common sense would suggest as much. The most casual observer of any of our great "naturalistic parks" will recognize the truth of this statement, that whatever beauty they may have is due to the character of the land itself. In what way have they been improved? By the planting alone! The roads and paths are not designed so much determined by the contours of the ground, and simply concessions to utility. The natural style, as such, is logically and practically reduced to a matter of planting. There is no other way of conforming to "the primary dispositions of nature," or of evoking its inherent beauty. If there is any attempt to alter "the natural character of the place," the chief object is defeated, while it is impossible to preserve or heighten that which does not already exist. The natural style of creating landscapes was never intended to supercede or to conflict with the formal style of making gardens.

The legitimate sphere for the expression of the natural style is thus in co-ordination with the landscape. Where nature is dominant, not only is it impossible to improve or modify her; but the attempt is against the dictates of common sense or of artistic appreciation. She must be followed closely, in such situations, as to her lines and forms, and her component features. Her weak points may be strengthened, her most characteristic features heightened. But her essential character cannot be altered—that is, no such thing as "design" may here be attempted. In short, the improver must follow in the footsteps of nature. But where nature does not

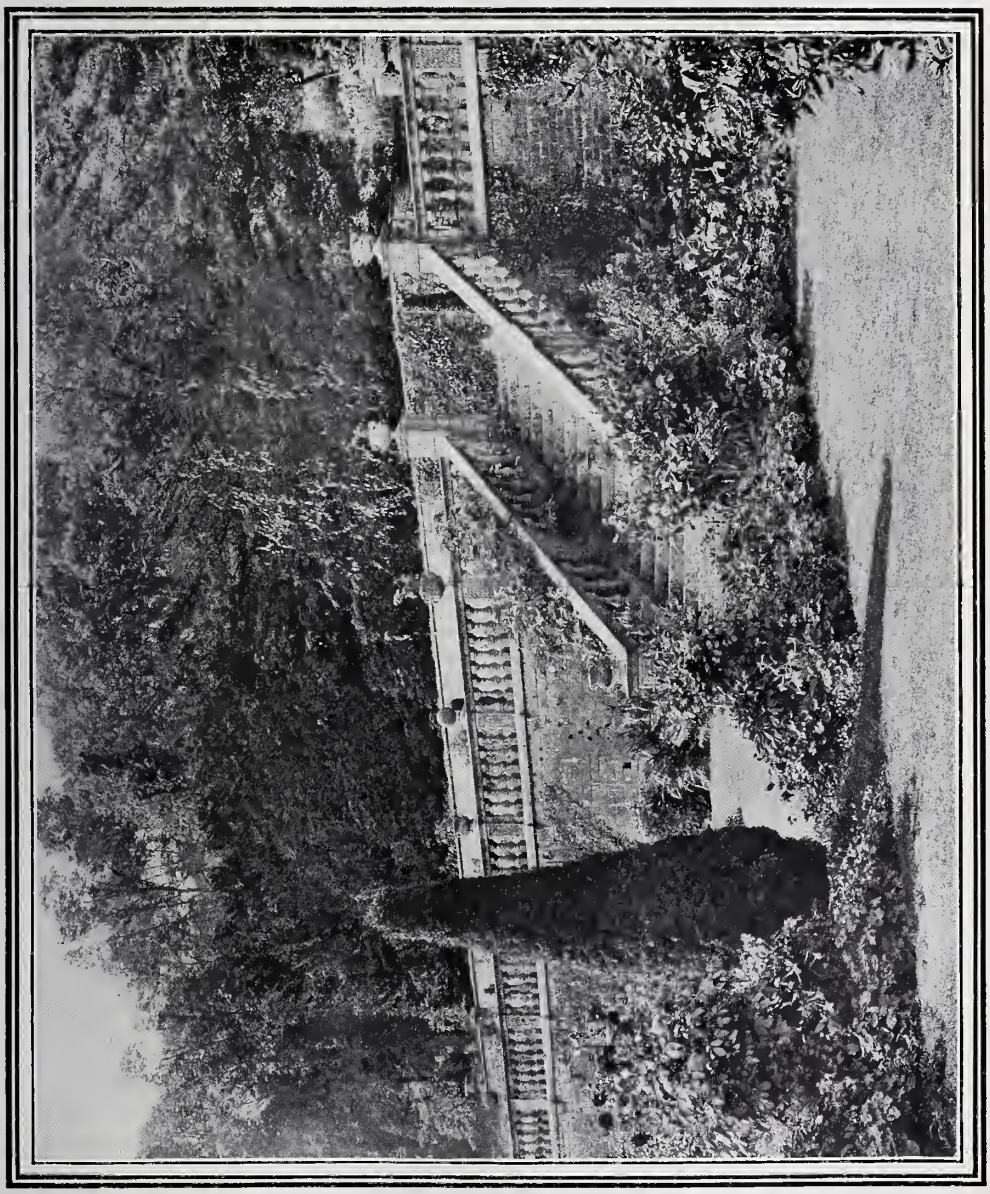


FIG. 11. ST. CATHERINE'S COURT, SOMERSETSHIRE. THE UPPER TERRACE.
Reproduced from "Formal Gardens in England and Scotland." Charles Scribner's Sons, New York.

inherently prevail, where the artificial is obviously in the ascendent, nature must be made to conform to art, that is, she must be conventionalized.

It is the abuse of the natural style that has justly brought it into disrepute. The parallel tendency to exaggerate natural effects by the landscape painters was criticized by Ruskin in his Modern Painters. With the alteration of a word or two, his criticism is well adapted to the point in question. He says, in substance, that "our naturalists delight in bringing the open field and moors up to the front door; they abhor all hedges and walls; never plant anything but free growing trees, and design rivers gliding at their own sweet will under the parlor windows; eschew formality down to the smallest detail; break and displace the brickwork which the architect has so carefully designed; leave unpruned the thickets which he would have delicately trimmed; and carrying his love of nature even to license, and the love of wildness to weeds, take pleasure at last in emancipating objects of nature from the government of man; on the castle displacing its tapestry with ivy, and spreading through the garden the bramble for the rose."

The original intention of the naturalist was in accordance with the general view here expressed nor is there any doubt as to its being the only logical and practical development of his principles. In the converse of the qualities adaptable to the natural style, we shall discover the qualities adaptable to the conventional style. Let us, therefore, take up the second suggestion already referred to: "Much of what is known as landscape gardening would more properly be called decorative gardening." This is a fundamental difference. When Kent leapt upon a garden wall and admired the beauties of natural landscape, he showed good taste. But as through his influence the "garden" was destroyed, and replaced by that sickly, passionless, shrub-spotted lawn that has ever since effaced all artistic expression, in connection with architecture, we may perhaps regret that Kent's leap was not immediately followed by a fatal fall.

The principles of the natural style have no value so far as artistic expression is concerned, and relevancy in connection with artistic or artificial surroundings. They apply simply to the improvement of landscape scenery exterior to, or beyond the garden wall; or to that portion of the grounds which should be designed in connection with, and as an outcome of, the dominating influence of the house itself. The point of deep importance and regret is that the original and beautiful conceptions of the artificial style have been slighted, and our rich inheritance of beauty in the formal or designed garden of past times disowned. What has replaced the unequalled charm of those old-time "pleasaunces" wherein

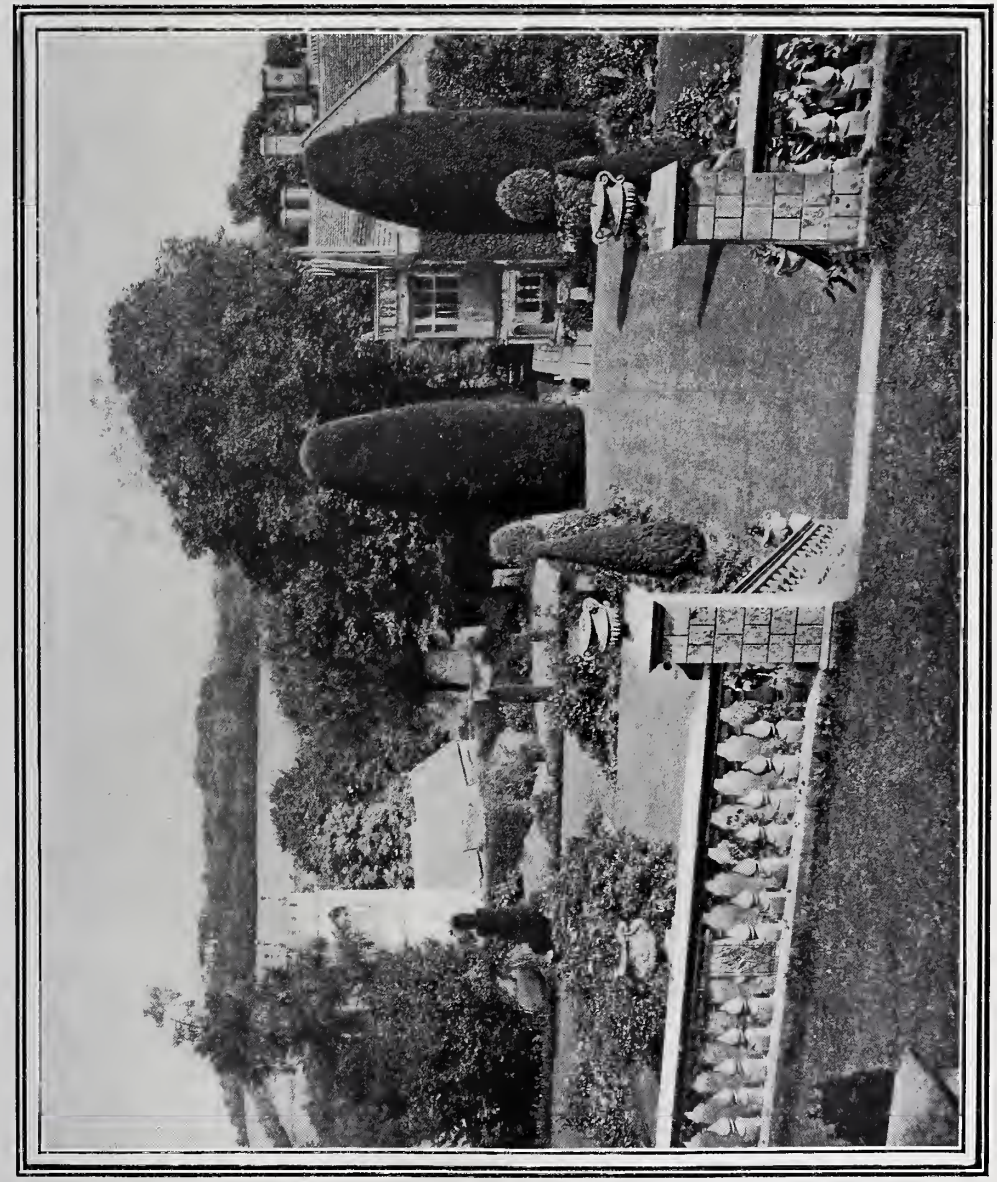


FIG. 12. ST. CATHERINE'S COURT, SOMERSETSHIRE. VIEW FROM THE UPPER TERRACE.
Reproduced from "Formal Gardens in England and Scotland." Charles Scribner's Sons, New York.

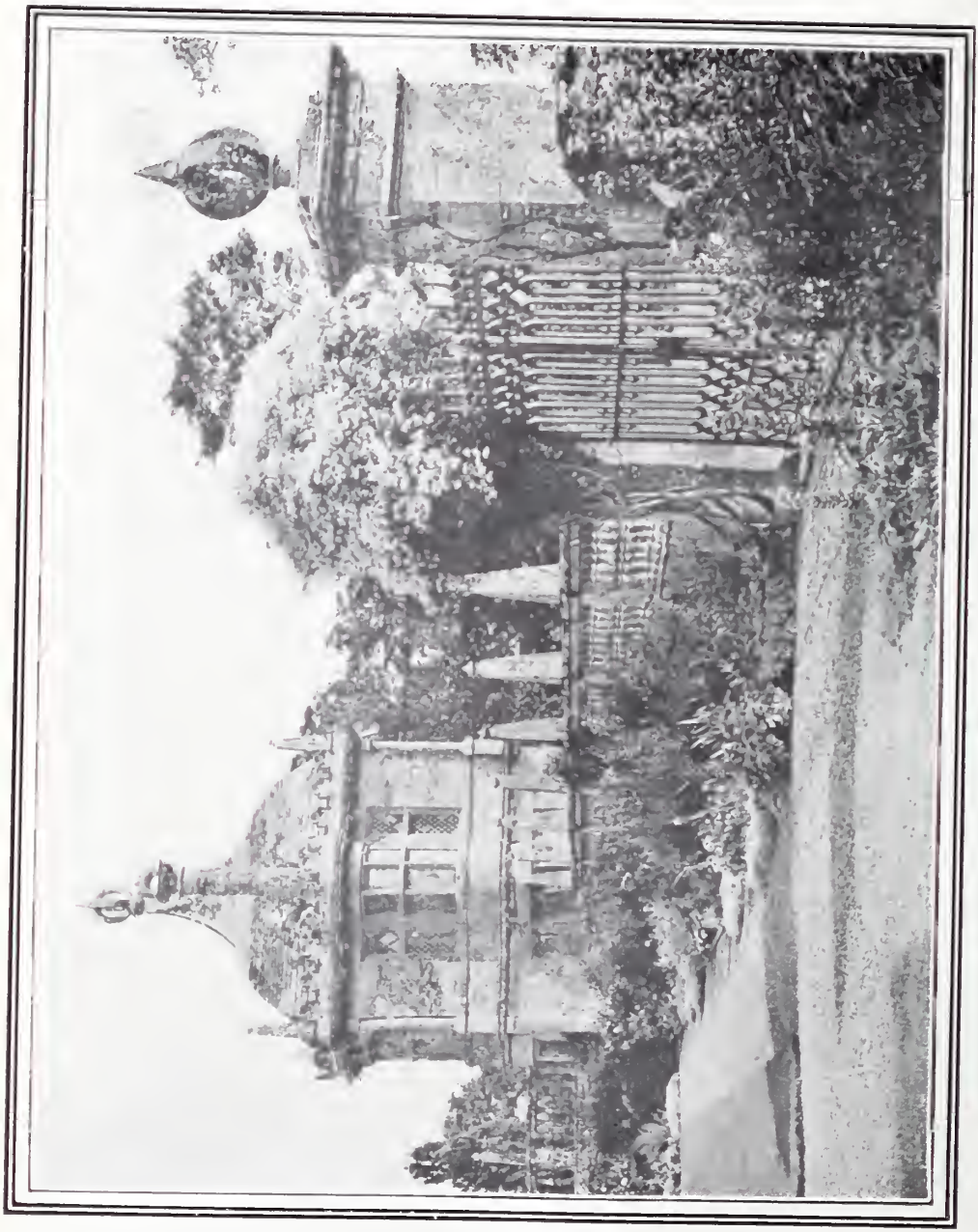


FIG. 13. MONTACUTE, SOMERSETSHIRE. THE GARDEN HOUSE AND PAVILION.
Reproduced from "Formal Gardens in England and Scotland." Charles Scribner's Sons, New York.

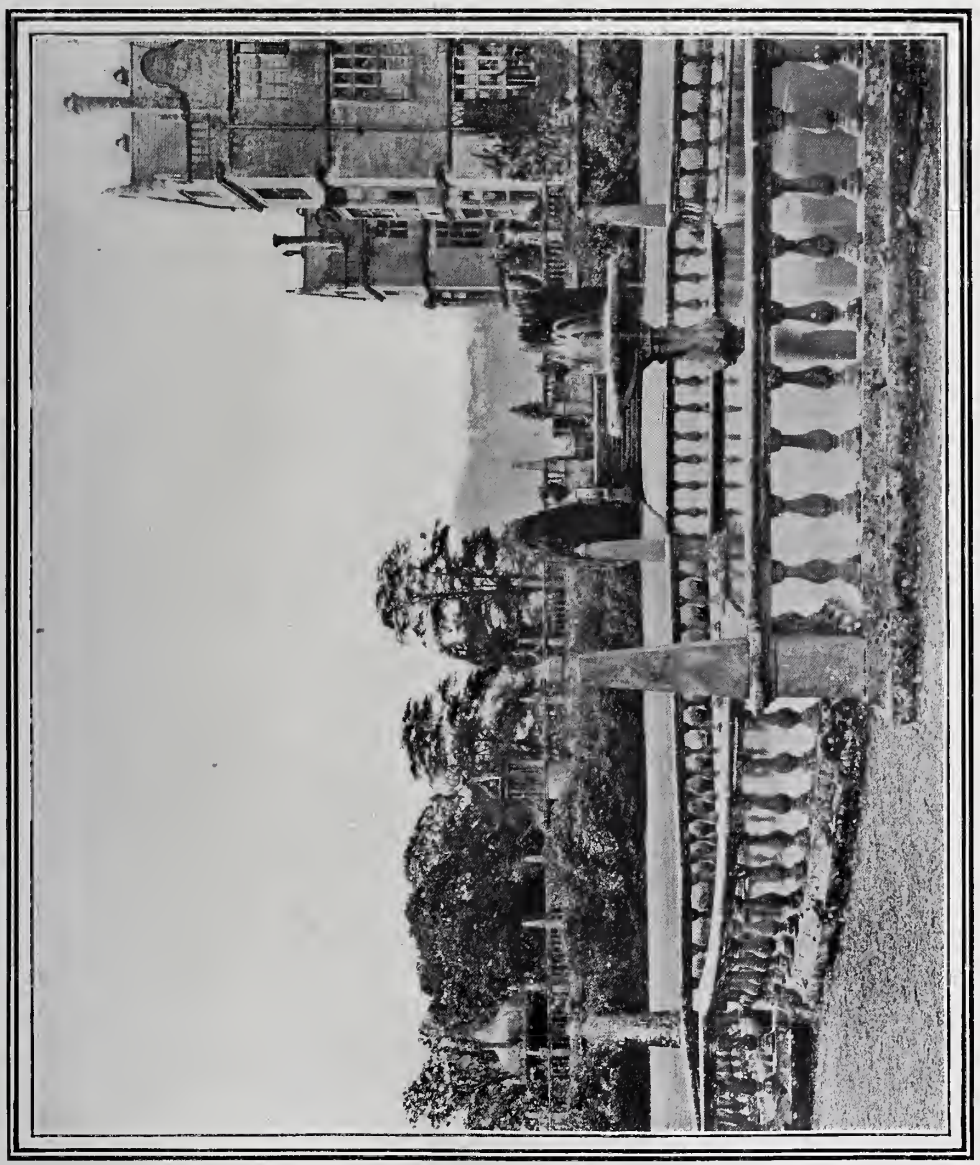


FIG. 14. MONTACUTE, SOMERSETSHIRE. VIEW ACROSS THE POND.
Reproduced from "Formal Gardens in England and Scotland." Charles Scribner's Sons, New York.

the hearts of our ancestors were wont to rejoice? To call the expressionless, impersonal, characterless fiascoes of our day, the results of a hapless cross between nature and art, to call them gardens is an irony beyond words.

But if formal gardens are inappropriate for country and suburban houses, what can be said of the incongruity of imitating the forms of nature in small city parks! How much of the subtle essence of nature is to be had by using landscape methods in a wholly artificial environment? To what extent can such lines of improvement lose themselves indefinitely, and unite agreeably with those of the surrounding country? What of nature is reproduced by formless irregular masses of shrubs, by winding and twisting paths, and shapeless masses of lawn? There is no need of stopping to argue that the natural style in such positions is an abuse and an absurdity. But to him who can perpetrate such artistic crimes, artistic fitness is of no value.

In conclusion, let me quote from an article on landscape architecture in "A Dictionary of Architecture and Building," by Russell Sturgis. In summing up the relative merits of the two styles, it reads. "The unquestionable possibility of producing designs of extraordinary beauty in formal gardens is to be urged on one side; and the desire of the citizen or hard-worked man, even of a country town to have as much as possible of free nature, or of a semblance of free nature around him is to be weighed on the other side." The article further states, in referring to the present revival of the formal garden that "the question will be for the future to decide whether the greater pleasure and recreation is to be got from these or the more naturalistic treatment of the grounds."

It seems to me quite clear that it is not at all a question of preference for free nature or of formal designs. Each style is capable of producing works of extraordinary beauty. The fact that the classical garden will probably appeal to the artist to a great extent, does not affect the relative fitness of either style for a given situation. For no matter how great the intrinsic possibilities of the formal garden or of the "natural" landscape, each will be pleasing only as it is perfectly fitted to its respective conditions. The question to be settled is not one for fitness, not one of preference. The constant tendency of those with predilections for the natural school is to overlook this fundamental question of fitness: thus it is well to bear in mind the warning given by Ruskin: "The punishment which all the laws of design render inevitably, is that those who thus pursue nature will wholly lose sight of art."

George F. Pentecost, Jr.

CROSCOMBE OLD CHURCH.

CROSCOMBE OLD CHURCH is in the little village of Croscombe, Somersetshire, England, about three miles from Wells. The village itself is very small, but the church is expensively built with a spire of cut stone; the nave and south aisle generally of Perpendicular style, but showing in the nave-arcades within and in the door of the south porch, seen in Plate 1, relics of a building of much earlier date. It is probable that the original structure itself is of the thirteenth century, but with window tracery, battlements, and the like, of the Perpendicular period; the nave roof remaining high and steep as in the earlier time, while the roofs of choir and south aisle have been made low and flat in accordance with fifteenth century taste. The battlements are unusually large for so low a wall, and even for the length of the nave, which they dwarf. The church is not as small as the exterior view suggests; but its charm is in the very beautiful details of the interior, which show how noble a design can be made, and what fine details well placed, when the nave is very narrow and proportionally high, and the aisles are comparatively ineffective. The roofs of the church can be judged by Plates 1 and 2. That of the choir is of very interesting construction, depending for its permanency on a broad arcaded structure crossing the choir from north to south, and serving as a kind of girder, as seen in Plate 2. The whole system reminds one, as does the design of the little wooden arches and pendants of the great Elizabethan and Jacobean timber roofs of London Company-Halls. The roof of the nave, much steeper and higher without, is of much earlier date, at least in its design, than is the choir roof. It is apparently the attempt of the artists of the Perpendicular style to build a roof arched up in a way rather unusual for them, in order to clear the point of the triumphal arch leading into the choir. They have done well with their task and have left a beautiful roof in general design, and one made exquisite within by delicate carving, with which are combined a number of heraldic shields. In other respects the church is not richly decorated within, and it is severely plain without. There is nothing of importance which belongs to the church itself, beyond the screen, pews and pulpit, and the chandeliers, evidently modern, are of but inferior design.

PLATE 1 shows the exterior of the church from the southeast, with the very fine east window. There is nothing in the exterior to attract architectural students particularly, except that the tracery of the three windows at this end is graceful and well proportioned. There are details which suggest repairs during the nineteenth century; and it is not impossible that the battlements, with their wretched little pinnacles, are modern.

PLATE 2 shows the nave from the southwest with a part of the admirable oak pew ends and pew backs, all of which seem to be of the same epoch as the traceried windows, that is to say, about 1420 A. D. The poppy heads are rich and of extreme delicacy of design, and the traceried sculpture on the pew ends and the long parapet of the pews nearer the choir are admirable in their way. Beyond these again, to the east, are seen pews of a style nearly approaching that of the pulpit, and therefore much later than the Perpendicular Gothic pew ends last above mentioned. These peculiarities are seen in Plates 3 to 6. Beyond the pews is the front of the very extraordinary chancel enclosure; but this forms part of the great screen, which will be better discussed in connection with other illustrations, as it is more perfectly seen in Plates 3 and 6. The pulpit is shown in this illustration in its completeness as an irregular octagon, of which one side is engaged with the pier of the nave arcade. An admirable canopy of the same material and design, richly carved in oak, is secured to the wall above the pulpit and completes the composition. A similar arch between the choir and the choir aisle affords the opportunity for the stairs to reach this pulpit, and accommodates the organ immediately beyond to the east.

PLATE 3 shows the whole choir screen, including that lower solid wall, which serves as reading desk, with continuous shelf for the books, as seen from within in Plate 6. Above this and a little to the east, rises the open timber work of the high screen, with arches worked in carved oak and a multiplicity of little columns intended to be classical in character, but delightfully varied in their details, and even in their proportions. The charm of this composition considered as an architectural design depends largely upon the massive superstructure bearing upon the slender columns above cited. This broad and massive piece of woodwork has an added effect of weight and dignity given to it by its abundant sculpture, all of which is deep and rich, with a boldness suggesting the use of stone rather than planks of oak, and implying familiarity on the part of the sculptors with the handling of that more massive material. The admirable placing of the royal arms occupying the middle of the fourth story of the screen, while it adds to the weight and therefore to the dignity of the broad band forming the third story, adds also to the richness and appropriateness of the whole.

PLATE 4.—The same interior seen from a point much nearer the east end. The pulpit can be better judged when seen from this point, and its extremely bold and original character admired as it deserves. There is apparently a deliberate combination between the canopy above and the pulpit with regard to the succession of the two very broad entablatures. The conditions have not allowed the canopy to be exactly centered on the pulpit, for the structure of the piers has thrown it off the axis. If that were strictly en axe, it would be seen that they are designed as if long slender columns (colonnetes) connected them, resting upon the pulpit and supporting the canopy. Here, as in the case of the screen, the sawed-out strap work is indefensible. The little obelisks which alternate with the frontons of that flat scroll work are good in form, but the appearance of such very small pieces of sawed and planed wood opened up and shown a jour is injurious to the whole design, as suggesting mere toys and wooden trifles of no dignity. They do not injure much the general effect of carved wooden architecture of the finer sort. The pelican tearing her breast, seen at the top of the picture, forms part of a private memorial structure, the monument raised to a dead lord of the manor, which is set here above the canopy of the pulpit and just over the last arch between the north aisle and the nave.

PLATE 5.—Here the northern half of the choir screen can he seen on a large scale, and while the light twinkles and flashes much of the elahorate carvings of the upper members, the work of the enclosure helow and of the admirahle Jacohean pews next adjoining it can he perfectly appreciated. It is odd to see in so beautiful a chancel, behind one of the most precious choir screens in England, and in front of an east window with intact fourteenth century tracery and glass, some part of which is intact, to see a wretched modern railing of light ironwork without character or significance of any sort in use as the altar rail. That is to say, as the very centre and chief attraction of the whole church to the faithful worshippers and communicants who form part of the congregation.

PLATE 6.—The interior of the church seen from the choir and looking westward, but a little north. In this way the Jacobean pews are in the foreground, and the beautiful late Gothic pews are in the distance. The inner side of the choir screen also is visible, and it is to be noted that the sculpture of the lower story, that is to say, of the solid wall below, is as rich within as without; the upper parts from above the eye and not easy to examine from the eastern side, are left very plain. The stalls, or such pews as replace and serve instead of stalls, affording room for the choristers, are seen on the left and on the right; and these have sculpture of the same style and character as that of the choir screen; though the light ironwork, which carries the desk in front, and which can be seen in Plates 3 and 4, is undoubtedly modern.

FIG. 1. MAIN DOOR OF THE CATHEDRAL OF S. MARIA AT CIVITA CASTELLANA.

COSMATI MOSAIC.

THE arts and crafts, like everything else in this world, have their periods of growth and decay, seldom, however, reaching complete extinction, as each decadence, sooner or later, is followed by a new birth.

In no one of the arts and crafts is this fluctuation between life and death more marked than in that of the mosaicist. At first the art was employed almost exclusively in the making of floors, attaining in the course of time a high state of excellence, until mosaic pavements became universal throughout the Roman world of the early Empire. Very little in the way of wall mosaic was attempted before the reign of Claudius, and no work of importance was executed up to the time that Constantinople was made the seat of government. Then it was that Christianity, a new force in the world, called forth picture mosaics of great artistic merit.

The fall of the Roman Empire was fatal to the art in the West. For a time it ceased to exist. Then it was resuscitated by artists from the Orient. Hence, at the beginning, the revival was largely governed in its expression by Byzantine methods of work and iconographic traditions, but later it developed along paths of its own, striking out for new roads of application and growth. In the East the art ultimately became circumscribed in its endeavor by a sterile and fixed conventionality, and because of its inflexible adherence to this conventionalism, together with the Mohammedan subjugation, it died of inanition.

The mosaics of Europe of the fourth, fifth, sixth and seventh centuries are noted for their great beauty and magnificence. There is a scarcely perceptible deterioration observable at the end of the period, but in the eighth and ninth centuries they are marked by a decided Byzantine feeling, imparted to them by the presence in Italy of a large number of Greek mosaicists, who had taken refuge there from the persecutions of the Iconoclasts. During the tenth century there was an almost total cessation of the art. It revived again in the eleventh. Fairly good work was done in the twelfth, and much better in the thirteenth. Then it was that mosaic began to be used very widely as a purely architectural decorative material. In the fourteenth and fifteenth centuries the

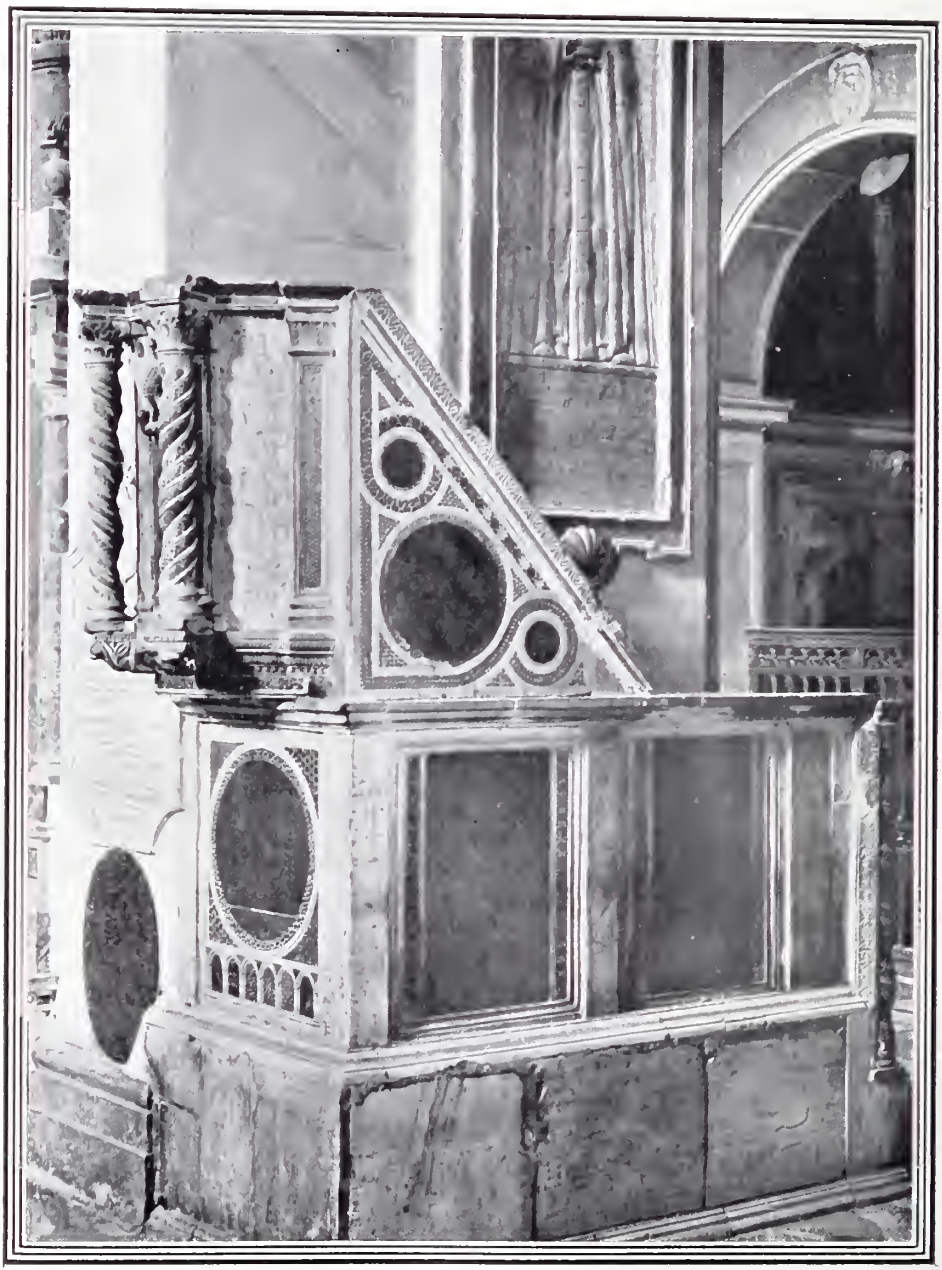


FIG. 2. THE GOSPEL AMBO IN THE ARA COELI AT ROME.

mosaicists returned almost exclusively to pictorial decorative work, while in the sixteenth and seventeenth centuries they became mere imitators of painters in oil, and so dexterously are their mosaics made that they are continually mistaken by laymen for the original pictures, of which they are copies. In the eighteenth century the art hardly existed. In the nineteenth it was called once again to life, and now in the twentieth century its value is fully recognized.

Apparently the artist in mosaic has a great future, especially in this country, because durable materials are being employed more and more, and mosaic is the only lasting substance possessing a large color field, and at the same time adaptability for permanent polychromatic architectural enrichment.

As the use of mosaic, at present, in America, is used almost exclusively for decorative purposes, rather than pictorial, it would seem well to study the works of the Cosmati, the great masters of this branch of the art: an Italian family of artists and craftsmen, who from father to son for several generations practiced their art with wonderful success. The family originally came from Anagni, a small hill-town thirty-seven miles east-southeast from Rome, migrating to the capital at the end of the twelfth century where they remained for over a hundred years, until the "Babylonish Captivity," as the Italians are pleased to call the removal of the Papacy to Avignon. The Christian names of the most important members of the family are well known, but their surname is unknown. Just why historians and archæologists have agreed to designate them as the Cosmati, is hard to say, although there is no doubt the name was derived from that of one of their number, Cosmatus; but why his name was chosen is puzzling, in view of the fact that he was not the eldest of his family. The time of their coming to Rome was at a period most favorable for their art, as it was a great building age. Cardinal Lothario Conti, like the Cosmati, a native of Anagni, had just been unanimously proclaimed Supreme Pontiff, and saluted, because of his blameless life, by the name of Innocent. He was a man of force, an organizer and a masterful leader, who not only raised the papal power to its utmost height, but also infused Christendom with a spirit of creative activity, which materially promoted the arts and crafts, and opened a field for the employment of artistic genius of every kind.

The founder of the cosmatesque school of mosaic workers was one Laurentius, who, on coming to Rome was at once admitted to citizenship, and made, in 1198, a member of the marble workers guild, an organization dating from 1150, which largely "accomplished its work at the expense of the ruins of Ancient Rome."

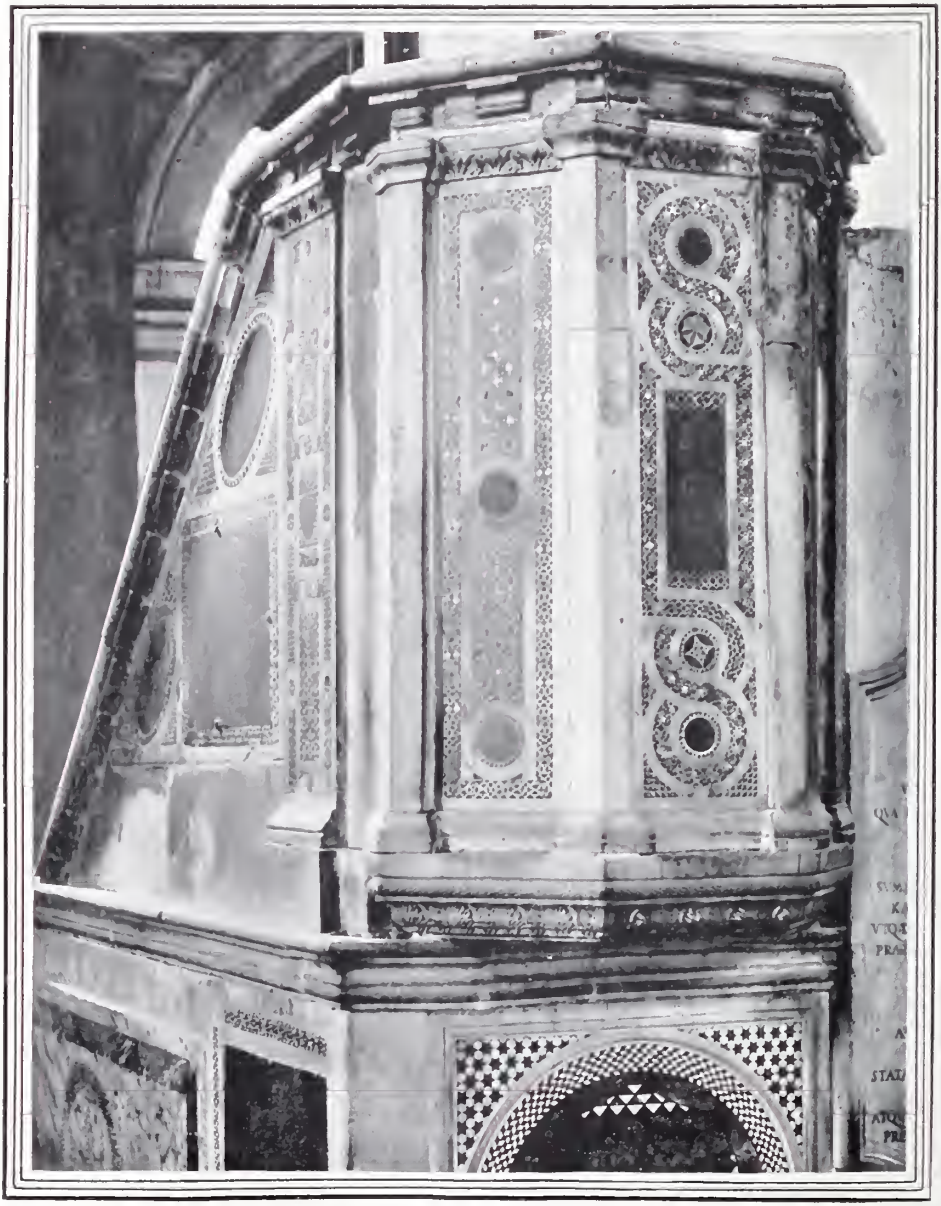


FIG. 3. THE EPISTLE AMBO IN THE ARA COELI AT ROME.

FIG. 4. THE PORTICO OF THE CATHEDRAL OF S. MARIA AT CIVITA CASTELLANA.

The relationship of Laurentius' family may be easily understood from the following brief geneological epitome of four generations:

Laurentius,
1140——1210
Jacobus,
1165——1234
Cosmatus,
1150——1285

Luca,	Jacobus,	Deodatus,	Johannus,
1221——1240	1213——1293	1225——1294	1231——1303

Very little, if anything, is known about the fifth generation, the grandsons of Cosmatus. At best they had but a short time in which to practice their art or to follow the vocation of their family, as the removal of the Holy See to Avignon in 1305 put a stop, in Rome, to all ecclesiastical and palatial building and decorating, reduced the population to 17,000, and caused many of the houses and churches to be dismantled. Amid this ruin and depopulation this gifted and meritorious family found little call for its work, and consequently the cosmatesque school of mosaicists ceased to exist.

Laurentius, no doubt, acquired his art from Greek masters, or their pupils, and for a time followed their method of work. Although this could not have been for long, as it is fully proven that at an early stage in his career he showed an independence of thought and feeling that freed him from the trammels of tradition, and Byzantine influence, and caused him to work from original motives. Applying, with wonderful artistic discretion, all the decorative resources of his art, he produced a style pervaded by a vigorous color scheme in union with a strong design (far more so than the delicate ornamental mosaic of the Venetian school), a style refined, although touched perceptibly by the Western barbaric spirit, yet quite free from the rudeness of the Roman and the hardness of execution of the then Byzantine schools. He never considered mosaic by itself, a thing apart from its surroundings, but always in conjunction with plain or sculptured marble surfaces: a decorative accessory to some architectural feature. So strongly was this use of mosaic fixed in his mind, that he invariably made his pavements, in design, similar to those of the Byzantines, of slabs of marble cut to a given form and bordered with a harlequinade of tessellated mosaic enrichment, a sort of combination of *Opus Alexandrinum* and *Opus Sectile* of the ancient Romans.

Laurentius, as a rule, employed white or light colored marble for his backgrounds, and these backgrounds, or fields, he inlayed with squares, parallelograms and circles of colored marble and porphyry, surrounding them with ribbons of mosaic, and separat-

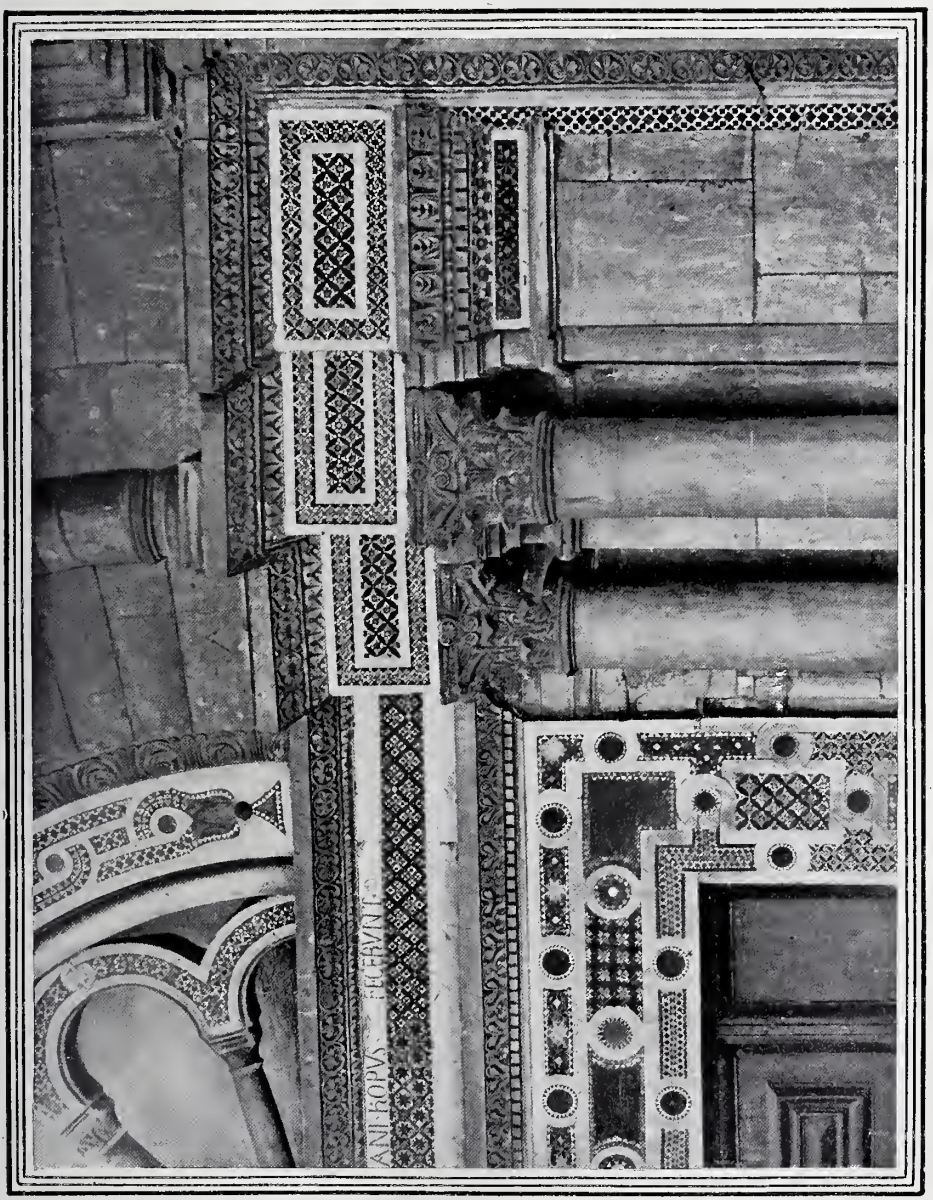


FIG. 5. A DETAIL OF THE DOOR OF THE CATHEDRAL OF S. MARIA AT CIVITA CASTELLANA.

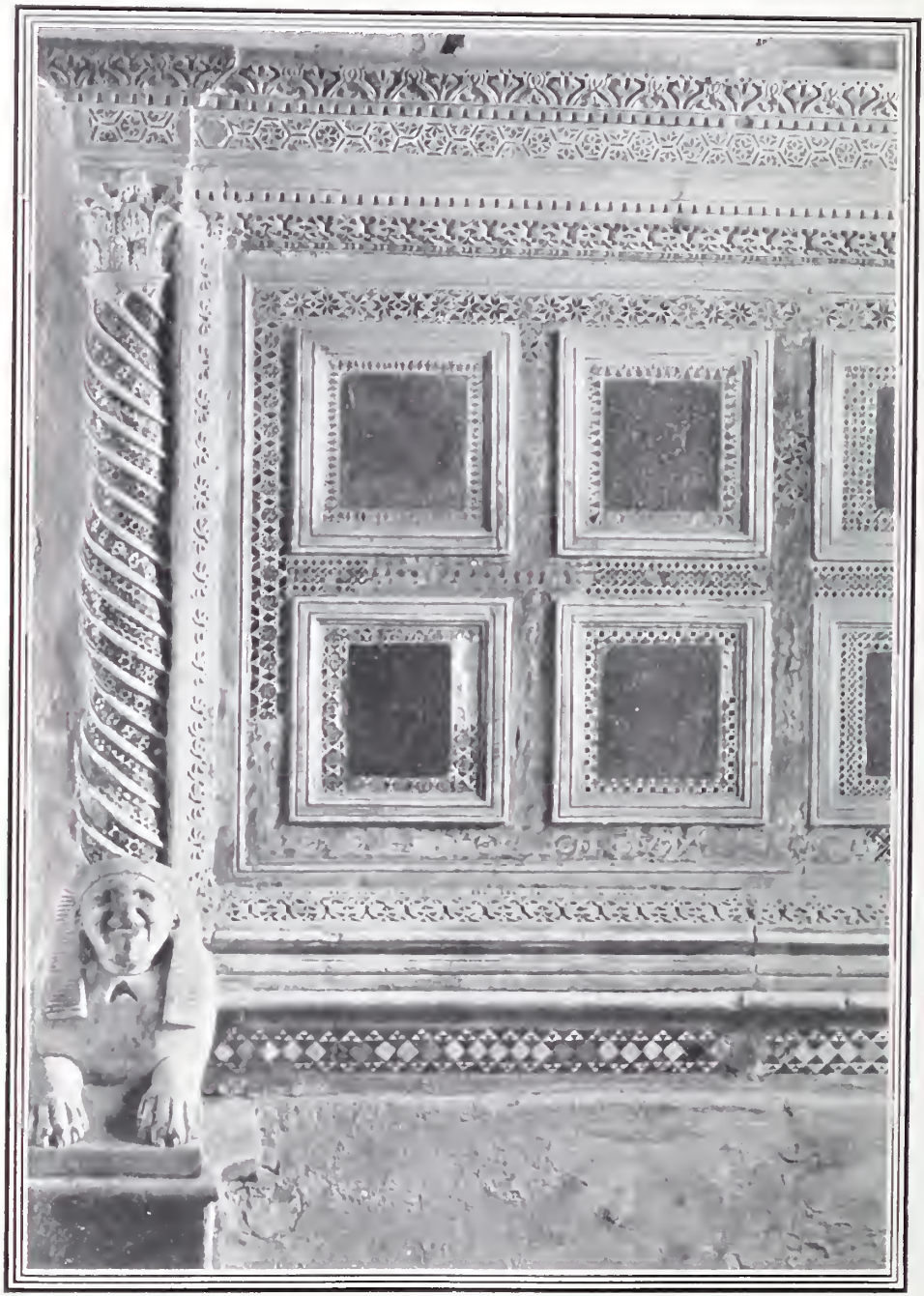


FIG. 6. A PART OF THE CHANCEL SCREEN IN THE CATHEDRAL OF S. MARIA AT CIVITA CASTELLANA.

ing them one from another, with marble mouldings, carvings and plain bands, and further enriching these members with mosaic. The mosaic itself was composed of small tesseræ of antique glass, mixed with those made at that time. The first were found in great abundance in the ruins of Rome and other ancient cities, while the latter were easily obtainable, as the art of making colored glass was then widely practiced throughout the Christian world. The designs followed were purely geometrical: a beautiful development of a star motive, most ingeniously diversified, not so much by change of form, as by variation of color.

Whatever work Laurentius may have executed, previous to his becoming a Roman citizen, has either been destroyed, or can no longer be identified. That he worked in the church at Fabieri in 1190 is known, but nothing of the work itself is known. The first authentic examples of his subsequent work are in the church of the Ara Cœli, at Rome (Figs. 2, 3): the epistle and gospel ambo, a choir-screen, no longer in place, but behind the high altar, and a pavement extending over the nave, aisles and transepts. This work, however, was not wholly his, as his son, Jacobus, was associated with him, to whom he gives full credit in the following inscription, which he placed upon the epistle ambo:

LAVRENTIVS CVM JACOBO FILIO SVO VIVOS OPERIS
MAGISTER FVIT.

This Jacobus, a most apt son of a most skilled father, was not only a sculptor and mosaicist, but also an architect, a fact made known by inscriptions on the walls of the Cathedral of Civita-Castellana (Figs. 1, 5, 6). Jacobus took charge of the architectural alteration of this interesting building, while his father, and later his son, Cosmatus, assisted him with the decorations: the sculpture, carvings and mosaics.

Civita-Castellana, even in the days of the Cosmati, was a place of great antiquity, and like the neighboring towns of Viterbo, Toscannella and Corneto, once formed a part of the Etruscan Confederation; and, because of its strategic position, situated as it is upon one of the commanding buttresses of the Apennines, approachable only from one side, by a long bridge spanning a ravine of one hundred and twenty feet in depth, was a place of great military importance all through the Middle Ages. To-day it is a forgotten village, seldom visited by strangers, but still the seat of a bishop, and possessing, behind its picturesque mediaeval ramparts, the cathedral where the Cosmati wrought so well in the fulness of their art.

The cathedral was originally a basilica, but during the course of the centuries it was very much changed by additions and deco-

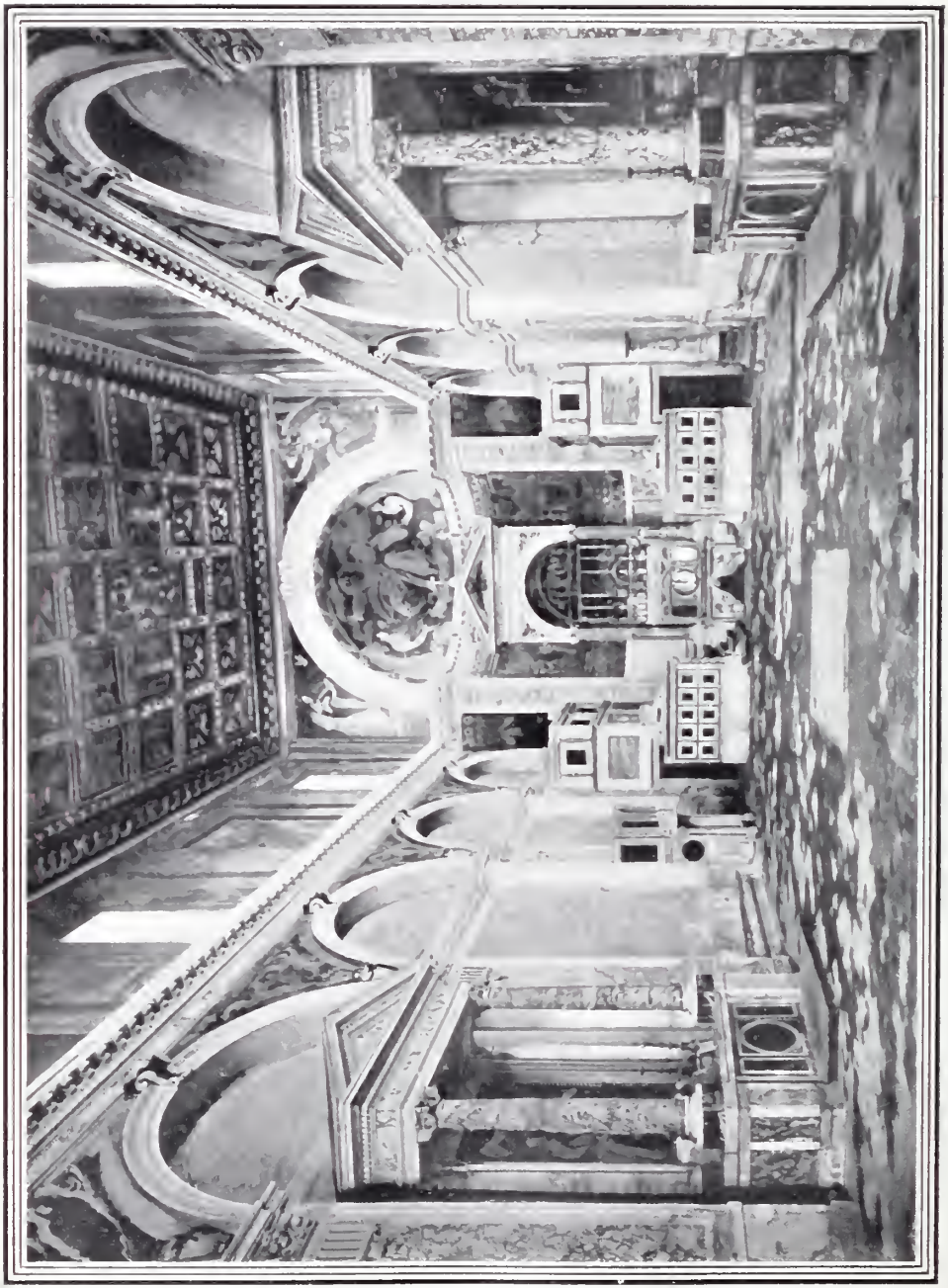


FIG. 7. THE ALTAR, CHANCEL SCREEN AND PULPIT IN THE CHURCH OF S. CESAREO AT ROME.

FIG. 8. A COSMATESQUE TOMB IN THE CHURCH OF S. BALBINA AT ROME.

FIG. 9. THE ALTAR FRONTAL AT FARENTINO.

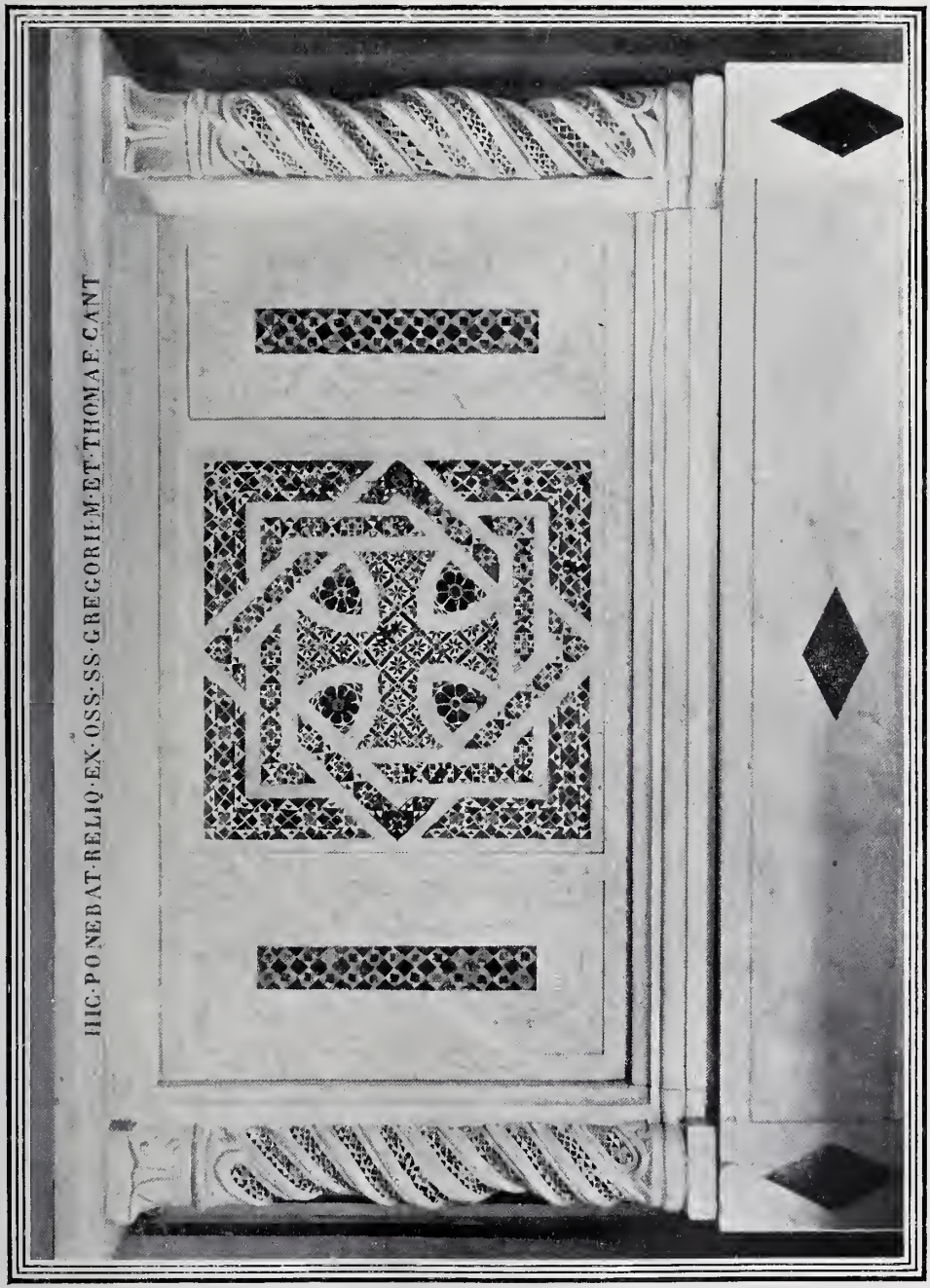


FIG. 10. AN ALTAR IN THE CHURCH OF S. SCOLASTICA AT SUBIACO.

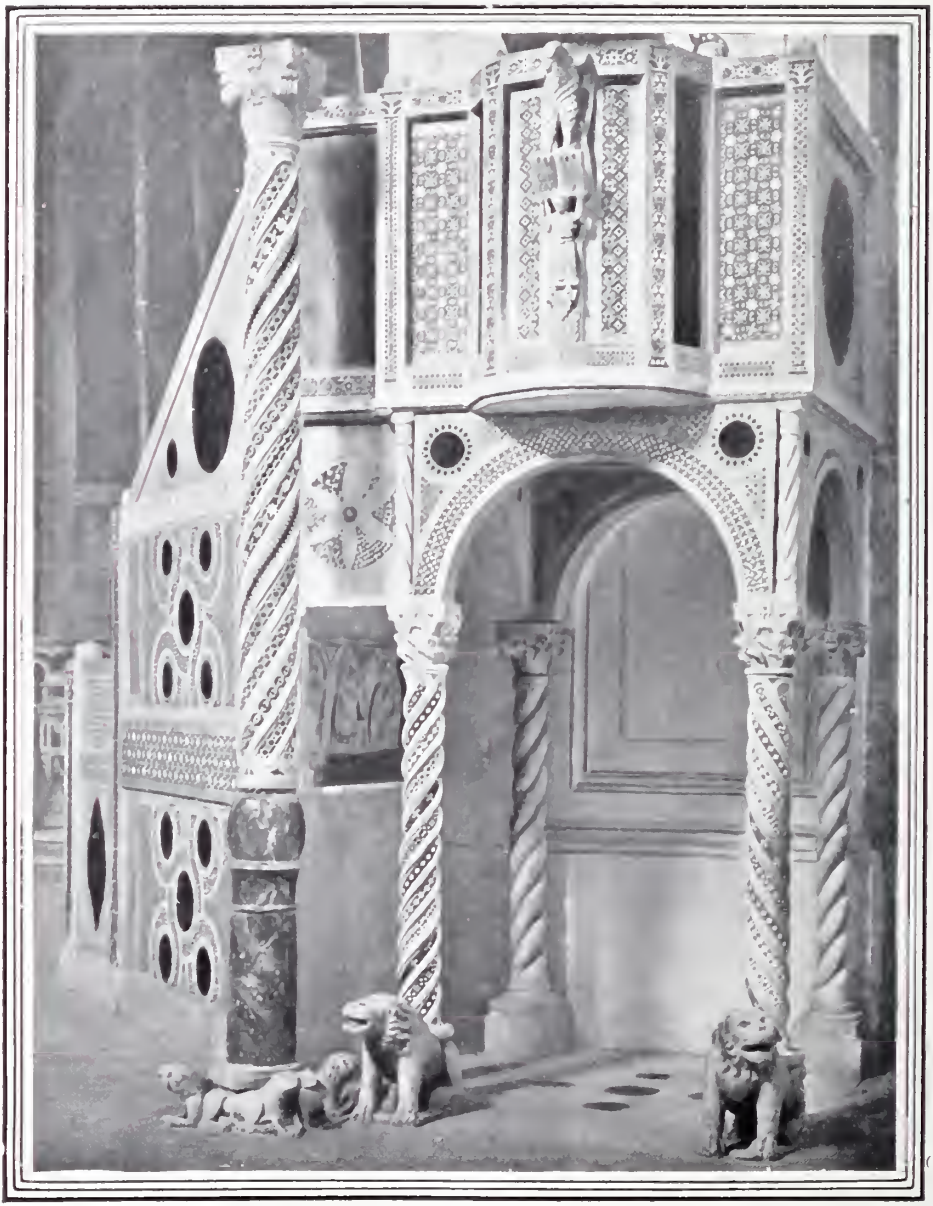


FIG. 11. A PULPIT AND CANDLESTICK OF COSMATESQUE WORK AT SALERNO.

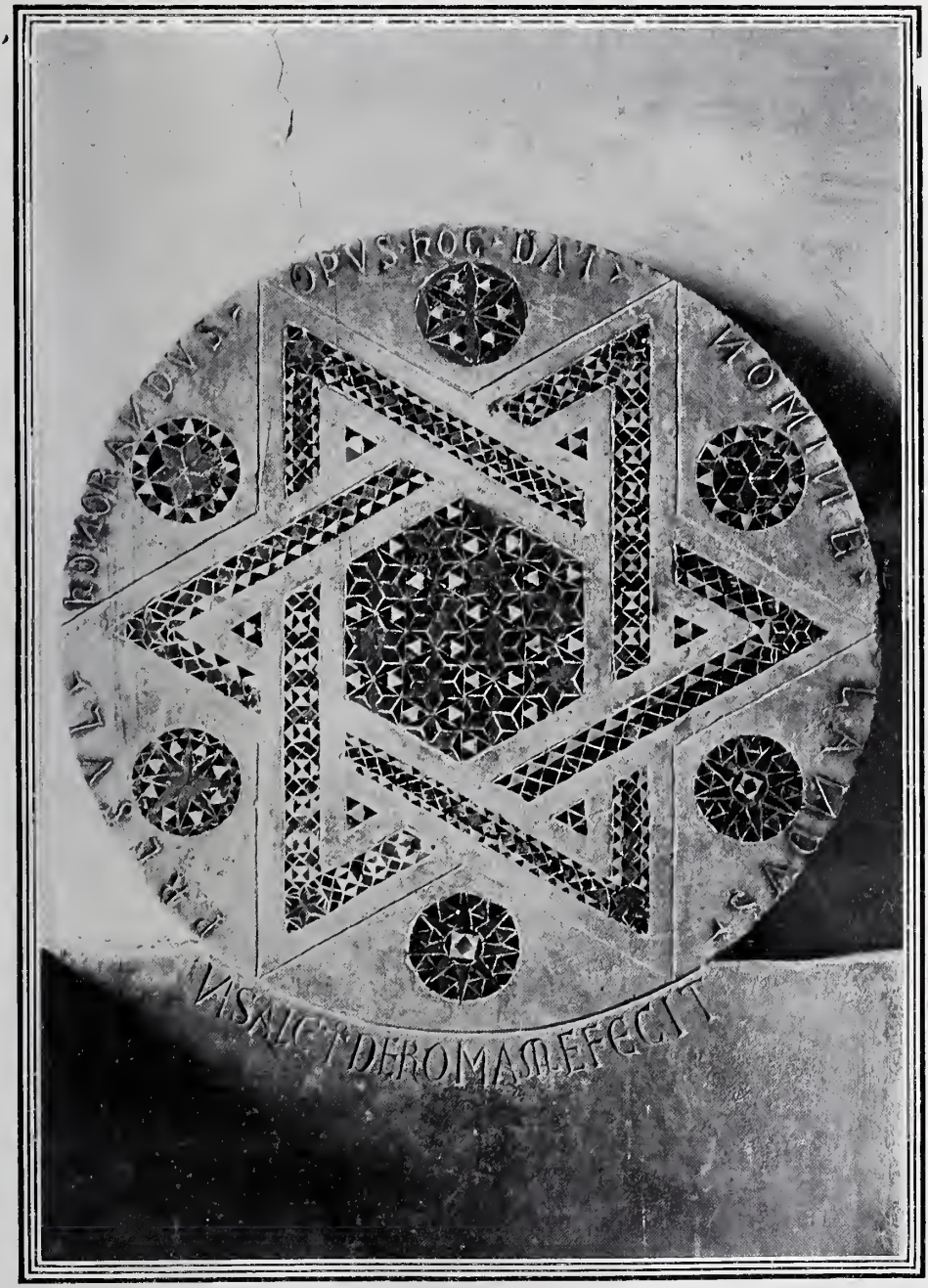


FIG. 12. PART OF THE BISHOP'S CHAIR AT ANAGONI.

rations, and lost its primitive simplicity; yet, it is even now one of the most interesting, ecclesiastical edifices in Italy, made so largely through the art of the Cosmati. The portico of the façade, extending across the entire front, approached by a flight of eight steps, is of moment in the history of architecture, as in some respects it foreshadowed the Renaissance, an anticipation of two hundred years (Fig. 4). The entablature and roof of the portico are supported on four square piers: one at each end, one on either side of the central opening, and in the intervening spaces by six monolithic shafts resting on moulded bases and crowned with Ionic capitals. The entablature is well proportioned, except its architrave, which is a little too high; the frieze is enriched with a mosaic of interlaced bands of gold and colored glass tesseræ, enclosing alternate disks and squares of serpentine and porphyry; the cornice, composed of moulded classical members, rests on a row of carved modillions. The line of the entablature, mid-way in its length, is interrupted by a round arch, surmounted by an Agnus Dei, carved in high relief. This arch, which gives great dignity to the portico, springs from two of the supporting square piers, and is flanked, on the right and left, by a pilaster, upholding an entablature similar in design and ornamentation to the one below; the spandrels are in plain masonry embellished with a sculptured eagle standing on a carved corbel, and, altogether, the arch is a fit introduction to the main door of the church, which is a superb example of Cosmatesque decoration, monumental in character, and at the same time precious in its mosaic embellishments. There are three doors in the façade, but the central one is the important one, the others are quite subordinate to it in size, design and decoration. It is made up of three receding arches, springing from a frieze of mosaic, which carries across the lintel of the door, and is maintained on each side by a pilaster and two columns, the last members having different points of rest. Above the lintel there is a semi-circular wheel of six spokes, decorated with inlays of glass mosaic, and below, between the lintel and the door, there is a broad band of mosaic which is continued down both sides of the arch to within four feet of the base line (Figs. 1, 5). Some years after the portico, doors and part of the interior decorations were completed, possibly in 1240, two of the sons of Cosmatus, viz., Deodatus and Luca, erected about the choir, or chancel, a low screen of white marble, carrying in regular succession two rows of goodly sized squares of porphyry and serpentine, surrounded by narrow bands of mosaic. Each slab is enclosed in a frame of marble, and separated from one another by a field of colored mosaic on a gold background, and the whole in turn enclosed in richly carved marble mouldings, and sur-

mounted with a heavy but finely sculptured marble rail. At each corner of the screen there was a column standing upon the back of a sphynx, its shaft enriched with a spiral of mosaic, and crowned with a semi-corinthian capital (Fig. 6).

Similar work to this may be seen and studied in many churches in different parts of Italy: Toscanella, Corneto, Subiaco, Anagni, Viterbo and Salerno (Figs. 9, 10, 11, 12), but notably at Rome, where the Cosmati, and their followers, not only supplied the churches of the city with ambos, altars, paschal-candlesticks, thrones and screens (Figs. 7, 8), but also distant places, as far away as England; witness the shrine of Saint Edward the Confessor in Westminster Abbey, which is unquestionably Cosmatesque work.

The brothers, Deodatus and Johannus, the last of the Cosmati, of whom anything is known, were pursuing their art at the end of the thirteenth and the beginning of the fourteenth centuries, with the same enthusiasm displayed by their great-grandfather in the twelfth century. Deodatus built in 1296, over the high altar of Saint Maria in Cosmedin, at Rome, a very beautiful marble and mosaic ciborium; and his brother, three years later, designed and executed in Saint Maria Maggiore one of the most "elegant mediaeval tombs in existence," that of Gonsalvus Rodrigo, Bishop of Albano, and later, in 1304, in the Church of Saint Maria Sopra Minerva the tomb of William Durandus, the learned author of the *Rationale Divinorum Officiorum*—a store-house of Christian symbolism.

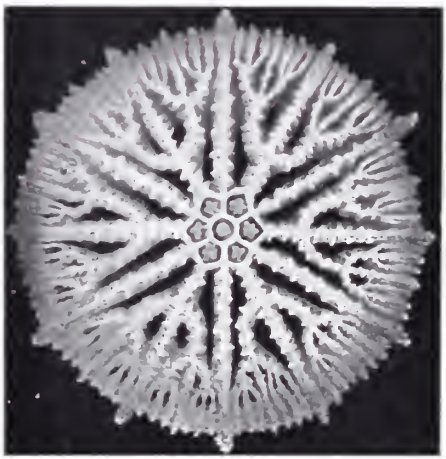
It is doubtful if the Cosmati have ever been excelled as decorative artists in mosaic, or been surpassed in their knowledge of the possibilities and limitations of mosaic as a decorative material; therefore, their works should be studied most carefully by all who are now attempting to use ornamental mosaic in a decorative way. Much can be gleaned from photographs about the forms they employed, and the proportional distribution of the mosaics to the conjoining plain and carved accompaniments, but their color schemes can only be understood by examining the monuments themselves.

Some few students, because of a seeming resemblance between the Cosmatesque mosaics and those of Monreale and the Cappella Palatina at Palermo, are inclined to deny originality to the Cosmati, and claim that their work was only a dexterous imitation of Silician and Oriental models, but this apparent similarity is only apparent when the mosaics are examined and compared superficially, for in truth, the mosaics of the Cosmati are largely inlays, where the marble has been countersunk to receive the mosaic, accompanied with carvings, while the others are nothing

more than ornamental dividing lines between plain surfaces, and often following in design floral and other naturalistic motives.

It is hoped this brief article, purely tentative, will excite a desire in the mind of the reader to know more about the mosaics of the Cosmati and the Cosmatesque school, and will thus lead to further study.

Caryl Coleman.



ARCHITECTURAL ABERRATIONS.—No. 19.

The Dorilton.

AT the corner of Seventy-first Street and Broadway, in the city of New York, stands a most questionable and question-provoking edifice in the guise of an apartment house. It not merely solicits but demands attention. It yells "Come and look at me" so loud that the preoccupied or even the color-blind passenger cannot choose but hear. And the effect of it on the passer is unusual. It is very infrequently that a building goads to such a pitch of animosity mild men, not especially interested in architecture, insomuch that they can scarcely express themselves about it in parliamentary language. "I don't know what it is about that man," observed Stevenson; "but he excites in me passions that would disgrace hell." Let us, then, institute a candid inquiry into "what it is" about this edifice that produces this effect.

Mere description would not take us far. In fact without the "ocular proof" of the photograph, or, still better, of the building itself, the impartial outsider would wonder, from the mere enumeration of the items of the aggregation "what it was" that made the man who experienced it so "hot," when he himself, the impartial outsider, would have only to be planted opposite the main front in order to fall to swearing also. The general scheme is harmless, current, and plausible. A central court, opening to the south, of fairly liberal dimensions for its purpose of light and air, certainly not obnoxious to the common reproach of being a mere slot, is flanked by two masses of building each somewhat wider than itself. If these wings could be further separated by widening the court, doubtless the effect of the disposition would be better, or if the building were half as high, six stories instead of twelve, in which case the court would be architecturally as well as practically ample. But one allows and must allow for these exigencies of the New York apartment house, and if the reservation of space for light and air is not liberal, as little is it mean. It is true that there is no sense in bridging the court at the level of the main cornice with an arch which at midday darkens two stories with its shadow. But distinctly the lateral composition of this front is not "what it is." Neither is it the lateral composition of the Broadway front, which shows a centre, marked by a five-story oriel in sheet metal, and ends forming the returns of the southern walls, and combining with them to form a pavilion, unmarked in the basement, but marked in the field of the wall by wide and emphatic quoining, and in the high Mansard by a projecton of the roof. It is true that both on the side and in the front the triple divisions are

THE DORILTON APARTMENT HOUSE.

Broadway and 71st Street, New York City.

too nearly equal for the best effect, or even for a good effect, but there is nothing necessarily infuriating about the arrangement.

Neither is there anything necessarily infuriating about the vertical composition. This also is triple. The precept of the excellent Aristotle is scrupulously and emphatically observed. The work has a beginning, a middle and an end—a beginning of limestone; a middle of ditto and brick; an end of slate and copper. These divisions also are more nearly equal than is customary, the middle the shaft, occupying just about half the total height and comprising six stories, while the basement has three and the roof three. Perhaps an addition to the shaft of two stories, taking one from the bottom and one from the top, would have much ameliorated the effect. That Irishman, celebrated by Joseph Miller, who, finding that his bed sheet, while it came comfortably up to his chin, did not cover his feet, cut a strip from the top and sewed it on to the bottom, has always passed for an example of fatuity. But if that Irishman had been an architect, he might have deserved praise instead of ridicule. Nevertheless, the somewhat high-waisted and somewhat low-shouldered look which this edifice derives from the disposition of its parts, would not account for the emotions which it excites.

Neither, entirely, would the material, though here we approach the heart of the mystery. A basement of light limestone, a superstructure of red brick, a roof of black slate and copper, there is nothing maddening about that. Moreover, the setting off of a single story at the top of the base and another at the top of the shaft, and striping it with the two main materials, as a transitional member, is a sensible and not too trite device, especially when, as here, each of the transitional stories carries a strong projection, in one case a row of balconies, in the other the main cornice, and the corbels of the projection are continued downward through the story. But the contrast of color is made violent by the peculiarly vivid redness of the red brick. A milder and mellower tint, or a less staring uniformity of tint, would have helped much the looks of things. We may do an injustice to mere pressed brick, but the fronts seem to have been painted. On the sides, which are "treated" only provisionally, this is still more apparent. The owner and the architect are entitled to credit for endeavoring to make presentable what is only casually visible, and for trying to bestow comeliness upon the more shameful parts. By employing a cheaper, rougher and less uniformly colored red brick upon these subordinate walls, they have made them much more agreeable objects than the smooth expanse of fierce red that burns upon the main front. In fact, the view of the lower part of the flank the spectator sees from the eastward along Seventy-first Street is very

agreeable, so far as the color and texture of the field of wall goes. It would be altogether agreeable, with the return of the striped story at the level of the main cornice, and with the other indications of the treatment of the front, but for some grievous drawbacks. The ugliest of these is the edging of the pavilion with a convex curve of sheet metal in absurd imitation of ashlar. Another is the fact that above the cornice line, a corbel course is projected in white brick, and to account for its projection not only the chimney but also the window frames are set in the advanced plane, while, worst of all, the brickwork here, where it is sure to be seen, has the same painted look as that of the main fronts, showing the insensibility of the designer to the merits of his rough and mottled wall below.

Doubtless this violent contrast of color is productive of base passions and is partly "what it is." One detail of it, which has a singularly exasperating effect is the glaring red of the terra cotta vases which have been placed upon the intermediate pedestals of the balustrade of the balconies above the third story, the terminal pedestals being surmounted with vases in cut stone, or sheet metal painted to that effect. (N. B.—The red vases are backed by the limestone quoining, but so for that matter are the gray ones.) At any rate, the fiery tint of the vases which seems to be meant to match that of the brickwork, is just far enough from doing so to set the sensitive spectator's teeth on edge.

Next to the violent contrast of color which is the most conspicuous fact about the building, one is inclined to note as most inflammatory the gross excess of scale throughout, the wild yell with which the fronts exclaim "Look at me," as if somebody were going to miss seeing a building of this area, twelve stories high! Regard a little those stone balls on the gate posts of the entrance, two feet in diameter, left there for Titans to roll at ten pins. Only less are those which surmount the pedestals of the railing, though these are so transfixed with metal handrails that the Titans could not get at them. Consider the stone-cutting of the basement, the enormous rolls and the deep recesses that attest the architect's insistence upon that kind of emphasis which the French call "emphase." Contemplate the flat arches of the basement, in which five of the round rolls do duty as voussoirs, the central one being prolonged to the floor line above and flattened on the face. Reflect upon that arched opening which runs through two stories at the centre of each wing, sustaining the three-story oriel in sheet metal. Mark the scale of the corbels at the top of the basement and under the main cornice. Most of all, inwardly digest that huge cartouche above the archway of the court. See the width of

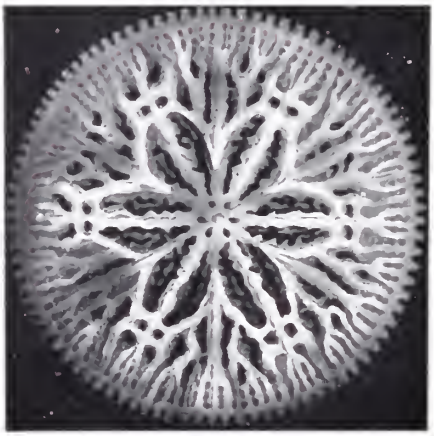
the quoining. How everything shrieks to drown out everything else!

Above the cornice line the riot is even less restrained. Nay, it is possible that a big quiet mass of roof, broken only by the necessary openings reduced to their lowest terms might have done much to bring even what is below to some sort of unity and subordination. But violent buildings come to a violent end. The architectural basis of this three-story roof is twofold—the necessity of "building to the limit," and the cheapness of sheet metal. It is really, this roof, under pretence of being a roof, three full stories in tinware, including the parapet story, ostensibly of brick and stone, with scarcely any reduction in area from its substructure, and the fact would give it a squeezed and skintight look, no matter how it was treated in detail. But it is treated with extreme cruelty. What a wonderful feature is that accumulation, on either front, of central dormers, in the plane of the wall below, but thanks to the cornice seeming to impend threateningly over and beyond it in place of crowning it! And then there is always or at least so often, the suspicion of fraudulency. What between the architect's frequent introduction of sheet metal in imitation of masonry, and his frequent introduction of masonry in imitation of sheet metal, that is to say, with that bloatedness and inflation of design which belong to the cheaper material, he "keeps us guessing" in a manner truly infuriating. "At least that is costly," you say of one detail which you take to be cut stone, or "at least that is cheap," of some other which you take to be of tin, but with no certainty, when the object is beyond the reach of ocular certainty in the case of either, that it is not the other praise to which it is really entitled. And this is unsettling to the intellect as well as embittering to the heart. The grand cartouche of the central arch "ought to be" of sheet metal. The outlying cartouches with the elongated shields, that drip down the piers are of sheet metal confessed, as much as the oriels. But even the corbelling of the balconies are under suspicion of malleability, though in a position where an imposture should be easy to detect.

The incendiary qualities of the edifice may then be referred, first to violence of color, then to violence of scale, then to violence of "thinginess," to the multiplicity and the importunity of the details. It would not be fair to pass without noting how thoroughly the sculptor has "worked in harmony" with architect, and caught the detestable spirit that reigns throughout. Remark, if you please, the cherubs, carved with some blunt instrument, that sprawl above the central gate. Remark, also, the allegorical figures that flank the base of the tin oriel at the centre of the side,

denoting—well, what? Peace and Plenty? Flora and Pomona? Nonsense. Gambrina and Bologna.

It is something to have abounded thus exceptionally in the sense in which so much of our current building abounds, to have put up an edifice which cannot be regarded with apathy, at sight of which, on the contrary, strong men swear, and weak women shrink affrighted. As Carlyle says of the London statues: "That all men should see this; innocent young creatures, still in arms, be taught to think this beautiful; and perhaps, women in an interesting situation look up to it as they pass? I put it to your religious feeling, to your principles as men and fathers of families!"



THE ARCHITECT'S PORTFOLIO

OF

RECENT AMERICAN ARCHITECTURE.

A CHRONICLE IN BLACK & WHITE

THE RIDING STABLE OF FRANK GOULD.

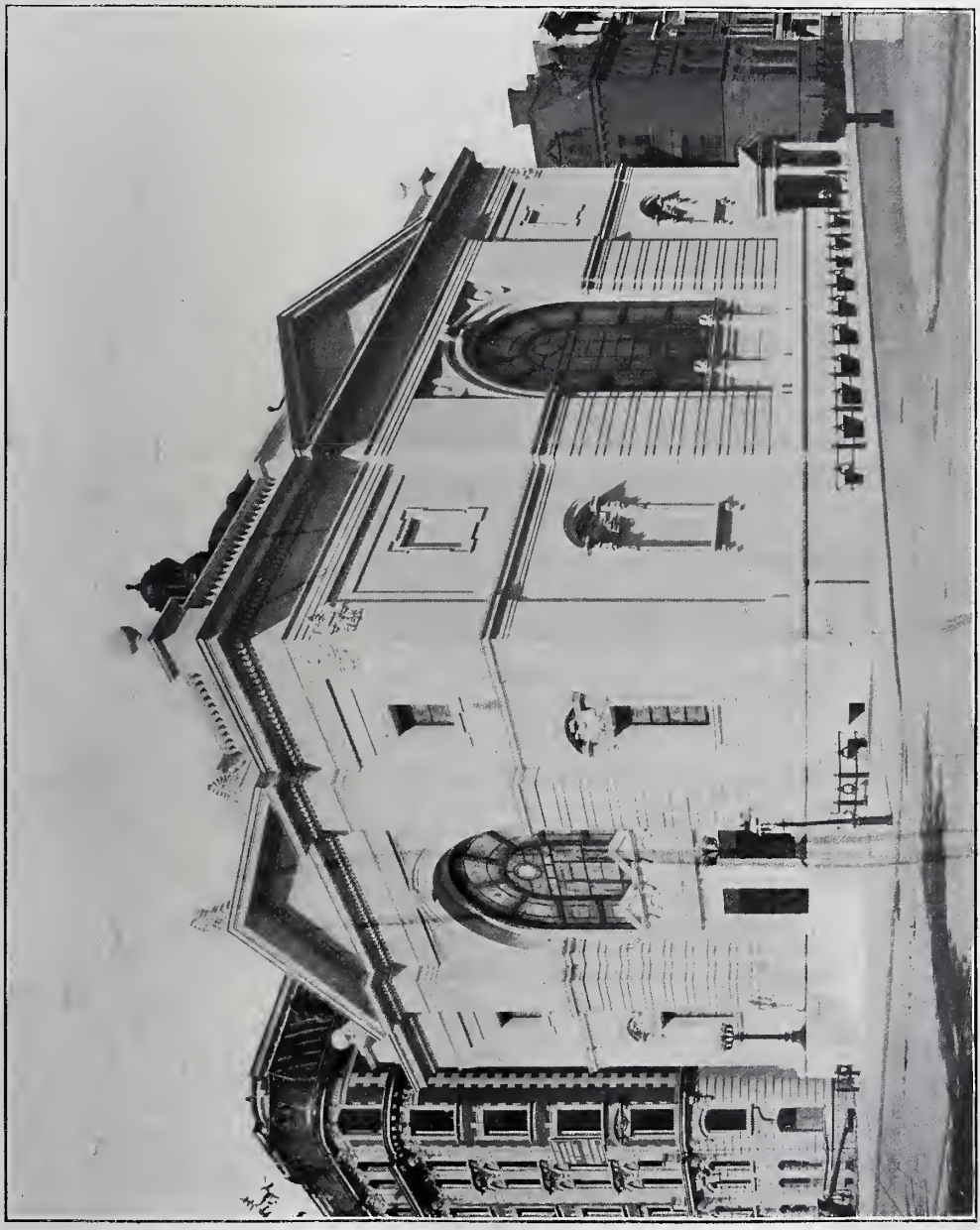
57th Street, New York City. York & Sawyer, Architects.

THE ALLEN COUNTY COURT HOUSE.

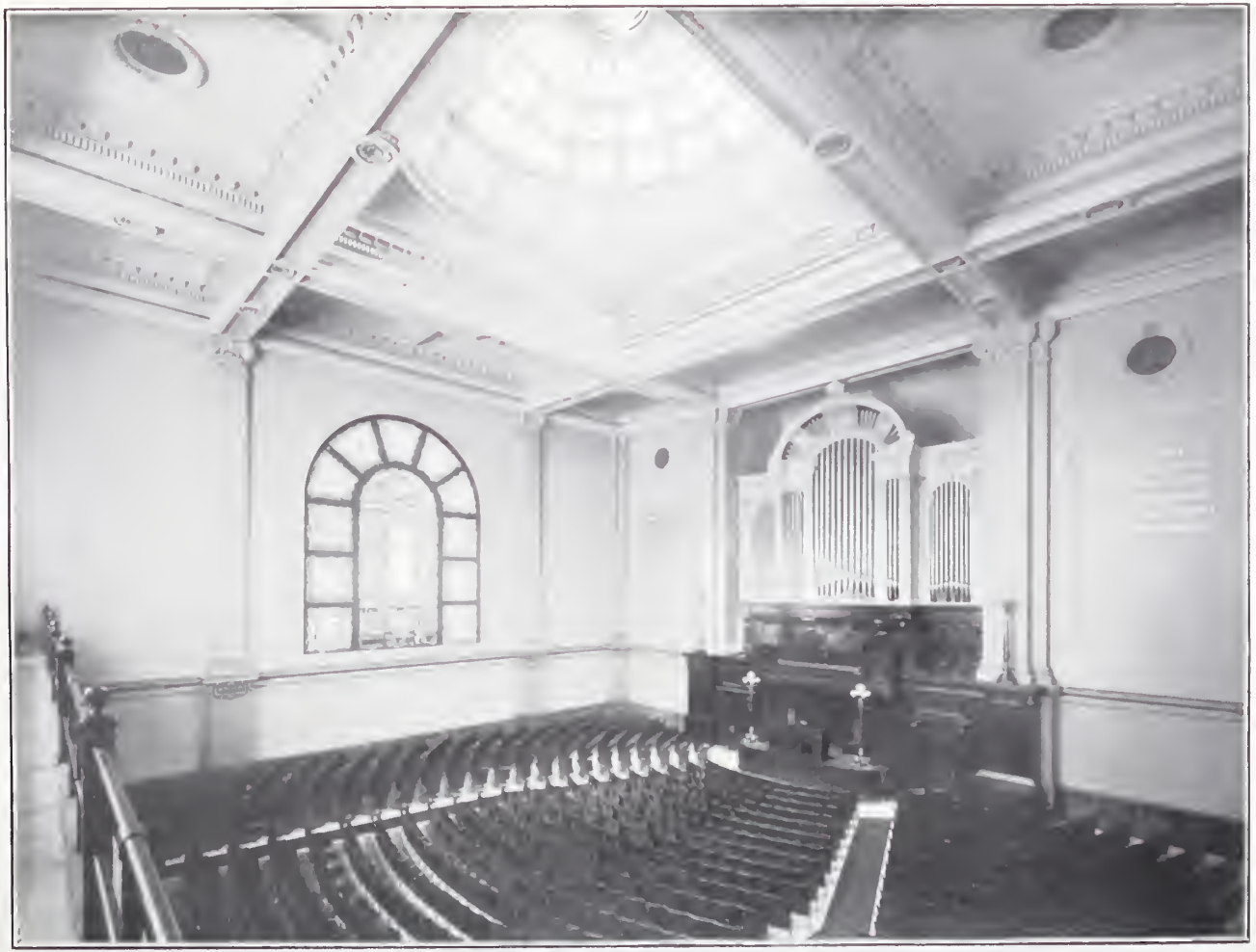
Fort Wayne, Indiana. Brentwood Tolan, Architect.

THE HOWARD SAVINGS INSTITUTION.

Newark, N. J. George B. Post, Architect.



EXTERIOR OF THE SECOND CHURCH OF THE CHRISTIAN SCIENTISTS.
F. R. Comstock, Architect.
Central Park West, New York City.



INTERIOR OF THE SECOND CHURCH OF THE CHRISTIAN SCIENTISTS.

Central Park West, New York City. F. R. Comstock, Architect.

LOCAL OFFICE OF THE NEW YORK TELEPHONE CO.

Irving Place and 18th Street, New York City. Cyrus L. W. Eidlitz, Architect..

FREE LIBRARY.

Newark, N. J.

Rankin & Kellogg, Architects.

BUILDING OF THE BANK OF THE METROPOLIS.

nion Square, New York City. Bruce Price, Architect.

AN APARTMENT HOTEL.

Southwest corner of Madison Avenue and 29th Street.

Harry Allen Jacobs, Architect.

THE TEXTILE BUILDING.

Southwest corner of Leonard and Church Streets. Henry J. Hardenbergh, Architect.

Opinions Official and Unofficial.

History can exhibit very few men capable of such ubiquitous activity as that of Emperor William of Germany. There is no important department of German life in which he does not try to make his influence dominant. He really seeks to be universally effective, and in some measure succeeds. It is the theory and practice of the Prussian and Imperial Constitutions, that all political initiative proceeds from the Crown; but it is not enough that he dictates the foreign and domestic policy of the State; that he is the real head of the army and the navy; and that he interferes continually in solution of all kinds of administrative questions. He seeks to be the moral and intellectual as well as the political, military and social leader of his people. No man not possessed of an almost demoniac energy, and a supreme self-confidence, would have dared to conceive much less to carry out such a programme. Of course there have been other monarchs, who have attempted like Emperor William to dominate both the action and thought of their people, but they were not the rulers of a modern state. The life of a contemporary nation is much more complicated and specialized than formerly; its national action is more momentous; the dangers of such a mistake as the French made in 1871 are appalling; and the Emperor William, responsible as he is to an elected assembly, is obliged patiently and painfully to unravel many a knot, which an earlier autocrat, such as Napoleon I. would have summarily cut with a sword. To play the autocrat at a time when autocratic rule is both more responsible than ever before, yet more resistible—that is the official task which the Emperor is seriously undertaking, and it must be admitted that he is making a brave show. It is, perhaps, just because he is obliged to persuade his people to follow him, that he runs over from leadership in political, military and social matters into a more dangerous attempt to determine by exhortation their moral and intellectual behavior. The more they think as he does, the more willingly they will follow.

A "Captain of Culture."

This is logical, perhaps from his point of view even necessary; but as we have said, it is dangerous. A military machine needs a "War Lord"; a money-making machine needs a "Captain of Industry"; but the intellectual life of a people is not a piece of machinery and does not need a "Captain of Culture." The Emperor, it is true, seeks rather to inspire the moral and artistic imagination of

his people, than to place it under specific orders, but the effect of official inspiration is none the less dangerous, because the inspiration itself is vague, strenuous and exalted. It would be far better for German art if the Emperor were content to be merely an art patron, rather than its friend and guide; but the man who gives subjects to his "professors" to paint, who himself determines the official architecture of his capital, and whose ideas about sculpture are contained in the following quotations, is a man whose influence on German art will be baleful in proportion as it is effective. His gospel of "Art for the sake of the State and the Hohenzollerns" is contained in an address which he handed down to the sculptors of the marble groups in the Avenue of Victory at Berlin, and among other things he said: "It (the Avenue of Victory) shows that the Berlin school of sculptors occupies a position which could hardly have been excelled at the time of the Renaissance. And I think that every one of you will ungrudgingly admit that the strenuous example of Professor Reinhold Begas and his conceptions, based upon his knowledge of the antique, have been the guides of many of you in the accomplishment of your great enterprise. Here, again, a parallel might be drawn between the great artistic achievements of the middle ages and of the Italians, where the ruler and sovereign, who was a lover of the arts, and who set the artists their task, did not fail to find those masters around whom a crowd of young people gathered, so that a definite school was developed and was able to achieve admirable work. * * * Sculpture still remains for the most part free from the influence of so-called modern tendencies and movements; it still stands exalted and sublime. * * * For us—for the German people—great ideals have become permanent possessions, while other nations have more or less lost them." What a rare combination this is of personal and national egotism and bad aesthetics! At best the "strenuous example" of Professor Reinhold Begas could result in nothing but a clumsy imitation of the grandiose and pretentious sculpture of the age of Louis XIV.

The verdict of foreign countries is said to be the verdict of posterity. If so, what will be the comment of posterity on the value which the Emperor puts upon the various expressions of German art. The sculpture which is the "product of a school" hardly excelled at the time of the Renaissance, which is free from "modern tendencies," and which stands "exalted and sublime" will be dismissed to the well-stocked lumber room of pompous failures. On the other hand the contemporary German drama which is not "exalted and sublime," which is the peculiar product of "modern tendencies," and which is too penetrating and subversive to find favor in official circles will be deemed the really significant and lasting

expression of contemporary German imagination. The Emperor should show the same salutary indifference to art as his "strenuous" analogue in this country, President Roosevelt. If there is any office which disqualifies a man from becoming a formative art critic, it is that of being an Emperor, for a man occupying such an office and believing in it, cannot possibly pass a disinterested intellectual judgment. He is the victim of the binding tradition he embodies, and is not in a position to understand the paradox of the artistic life—that a work of art can be a great and lasting achievement, only because the artist unites with his peculiar gifts and training a large penetrating and passionate vision of human life; and yet that any striving after moral insight and elevation or of emotional intensity is almost always fatal to the eminence and integrity of his artistic achievement. An artist may strive after but one thing, perfection of performance; the rest must be given. So much for the "strenuous examples" of "professors" of sculpture, and the "great ideals" which other decadent nations have lost, but which are the "permanent" and we hope the exclusive possession of Germany.

In our own country one frequently feels inclined o regret that there is so little formative energy in American social life to take the artist out of the circle of his technical interests, and make him build better than he knows, but after pondering this attempt of the German Emperor to make German art less modern and technical, but more dignified, elevated and German, we do not feel inclined to quarrel with American conditions. The future of American art is where it belongs, in the hands of American artists, and not in those of Emperors, or "bosses," or "Captains of Industry," or any other apostles and examples of active and strenuous living. These artists certainly would not be harmed by the infusion into their work of rather more energy and originality, but if they keep on minding their own business and crying "Hands off" to official and popular influences, the formative impulse when it comes will find them prepared. As long as the official is necessarily somewhat conventional, artists should always remain socially independent and Bohemian—touched, it is to be hoped by the better impulses of contemporary life, and by no means merely protestant and vagabond, but still in some measure a separate class, with special standards and interests. In our modern society it is only under such conditions that they can keep their technical standards sufficiently pure, and their personal inspiration fresh and genuine.

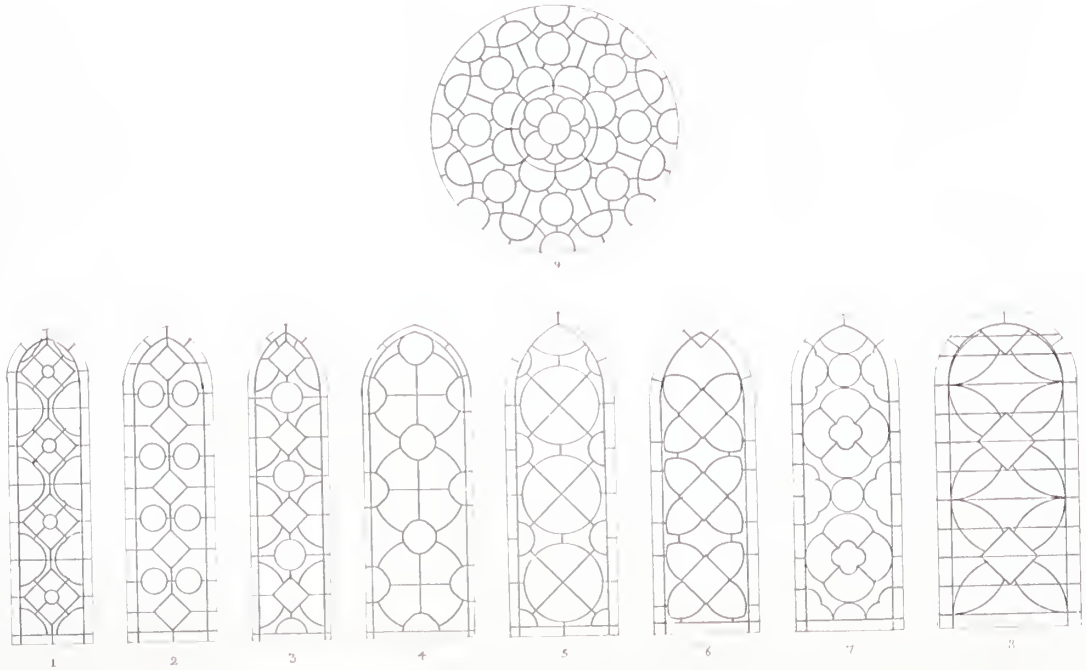
As a rule all modern colored glass windows are weak in construction, more especially those made in this country, and hence are not durable. The reason for this is easily understood, when it is remembered that the weight of the glass, plus the wind pressure, is sustained and resisted solely by the soft metals lead and copper: strips of lead are used to hold the various pieces of glass in juxtaposition and copper wire, soldered to the leads, to attach the glazed light to horizontal round iron bars, which are placed at regular intervals in the sash or frame. In consequence of this method of construction, in the course of time, a window sags or bellies from its own weight, and because of the wind pressure, the glass becomes loose in the leads, the copper wire stretches and often pulls away from the point of attachment, and the window leaks and finally tumbles to pieces. In American windows this disintegration takes place very much sooner than in those of Europe, because the glass employed is in itself much heavier, and because of the additional weight added by the practice of superimposing one thickness of glass over another.

A Plea for Armatures.

It is evident that it is of vital importance, alike to the artist in glass and to the owner, to overcome this weakness, and to lengthen the life of their windows. The solution of the difficulty will be found in returning to the method of construction in vogue during the middle ages, viz., the use of the armature, and supplementing it by the modern method of reinforcing the leads with steel. If these two strengthening processes are employed the artist can be sure that his windows will last, and will be seen by his children's children.

The mediaeval artist divided his windows into sections, and these sections were held in place by iron frames or armatures, which not only reduced or lessened the downward weight pressure, but also offered to the wind a resistance which neutralized its force. At first they used them without any thought beyond their sustaining value, but at the end of the twelfth cenury they made them take their place in the general composition, so arranging them that they not only did not offend the eye, but became important factors in the design. Some of them were quite complicated in form, consisting of squares, circles, semicircles, lozenges, roses, trefoils and quatrefoils, combined in such a way to harmonize, not only with the design of the window but also with the general architective motive. They were made of flat wrought iron bars, welded together so as to support one another, and furnished with flanges, bolts, and keys to hold the glass in place.

If there any good reason why a window artist of the present



ALL THESE ARMATURES ARE OF THE 13TH CENTURY.

(1) St. James at Chartres. (2) St. Eustache at Chartres. (3) Charlemagne window at Chartres. (4) St. Thomas at Bourges. (5) St. Stephen at Bourges. (6) St. Joseph at Bourges. (7) The Prodigal Son at Bourges. (8) St. Eustache at Sens. (9) An ornamental rose window at Dijon.

THE STORY OF ST. MARTIN AT VARENNES.

should not return to the use of armatures? To-day iron is far more abundant and cheaper than it was in the middle ages. Moreover, he has at his command the angle-iron and T-bar, which lend themselves far more readily as supports for the glass than the flat bars of mediaeval times, offering as they do a deep rabbet for the reception of the edges of the sections of the window.

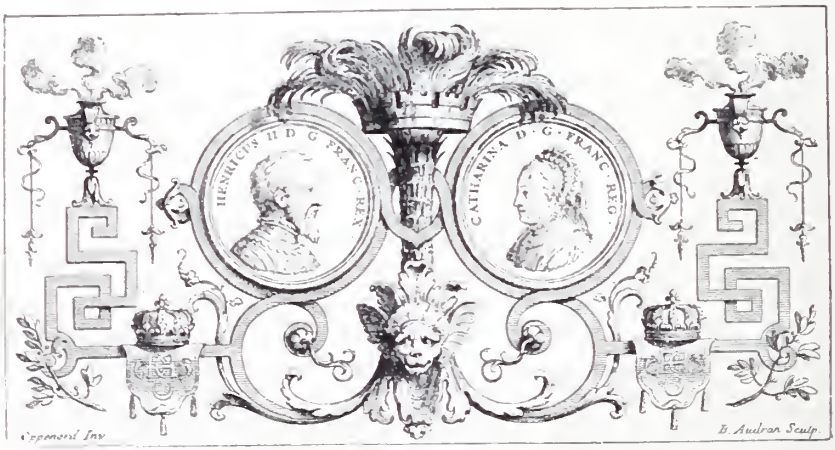
It has been objected that armatures interfere with the pictorial effect; and that their presence distract the attention of the spectator, carrying his eyes away from the ensemble, so that he sees the design in parts, thus breaking the unity of the composition. The first objection has very little weight, as it is based upon a misunderstanding of the true office of a colored glass window, which should never be a picture *per se*, a picture in a pictorial sense, but simply a decorative picture, a polychromatic note in the general scheme of decoration. The second objection will have nothing to rest upon, if the artist takes the armature into consideration when he makes his design, harmonizing it with, and making it take its place in the composition as one of its elements and integral parts. If there were any validity in this last objection, it would hold good for the same reason against the lead lines, and would call for their elimination; if on the other hand

it has no force, the decorative value of armature and leads are equal in every respect.

The reinforcing of the leads by means of a strip of steel: a ribbon metal resembling a watch spring in form, is a very simple matter, and when used with discretion will not interfere with the design and will add greatly to the durability of the window. If these two methods of construction were specified by architects, and insisted upon, the builders of the glass windows would be forced to employ them and the artist would soon fall in line, and would shortly learn to harmonize them with their designs.

It is true that they would add considerably to the expense of the construction, but that is a small matter, in view of the additional light they would give to the windows. If something of the kind is not resorted to our American windows, within fifty to one hundred years, will be in a deplorable condition, unless they are repaired from time to time, which is a costly operation.

Why not start right at first? Why not use the armatures and the reinforcements?



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M. NÉNOT,

ARCHITECT OF THE NEW SORBONNE, THE MONUMENT TO KING VICTOR EMMANUEL, ETC.

WHATEVER the future may have in store for M. Nénot, the French architect, who is still young and full of energy, it cannot be expected that he will ever place to his credit another achievement of such capital importance as the New Sorbonne, recently completed, and it is, therefore, very natural that, in entering upon a study of that gentleman's works, we should give the said edifice the first and foremost place.

His task has been a bigger one than any other that could be mentioned among the more recent creations in architecture and construction. To cover a superficial area of twenty-one thousand square meters, to group together and fit up in an appropriate manner the extensive and diversified premises requisite for a Faculty of Letters, a Faculty of Science and a School of Charters, and this in accordance with requirements ever on the increase and the constant improvements that are being suggested by modern science—all this, we say, assuredly demanded not only an architect's scientific knowledge, but also a mind always on the alert. These qualities are combined in M. Nénot to a high degree, and it was a very fortunate thing, from a public point of view, that he secured first place in the competition which was held for the reconstruction of the Sorbonne. Competitions are sometimes risky, and in many cases the result causes a good deal of astonishment; but, in the present instance the selected plan and its author were not destined to turn out inadequate, or give rise to the slightest disappointment. A pupil of the Ecole des Beaux-Arts, winner of the Grand Prix d'Architecture, and as such sent to Rome to study at the nation's expense, the author of a res-

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toration, very skilful and as complete as the actual state of the excavations allowed, of those famous sanctuaries which were the splendor of ancient Delos, M. Nénot had already acquired a certain reputation—at least, in the world of archæologists and architects—and the competition which was instituted by the City of Rome for the erection of a monument in memory of King Victor Emmanuel placed him at a stroke in the very first rank. His plan, which was loftily conceived and of triumphal aspect, being, in fact, such that a Cæsar could not have longed for anything more magnificent, succeeded in securing a majority of votes. The honor was all the more striking as the jury, composed of Italians, could not have been animated by any great sympathy for a French architect. This scheme for a monument to a gallant king was fated to remain a dazzling vision (no doubt M. Nénot had been under no delusion on that point). Fortunately, the project for a new Sorbonne appeared, escorted by the millions of francs which the State and the City of Paris, fraternally associated, provided with an unstinting hand. Before he had reached the age of thirty years, M. Nénot realized this dream of a vast edifice, the child of his brain, which was to spring up docilely out of the ground and take its place in the full sunshine.

The scheme of enlarging the Sorbonne originated long ago. As far back as the year 1853 there was laid, with great pomp, a first stone to which was never added a second. The Minister of that day appointed this memorable event as a theme for the Latin verses in the great annual competition between the cleverest pupils of all the Paris colleges. It was a pitiful comedy, indicative of a government fonder of hollow parades than of sincere and genuine progress. It is to the honor of the Republic that it has builded more and better.

The vast buildings composing the New Sorbonne are bounded by the rues Saint-Jacques, Cujas, Victor Cousin, de la Sorbonne (which is a continuation of the rue Victor Cousin) and the rue des Ecoles. The principal front borders the last-named street (Fig. 1). We will begin our inspection there. The central forepart, slightly jutting out, has five arcades flanked by two doorways with frontons. The lofty upper floor has high mullion-windows framed in half-imbedded Corinthian columns, and is surmounted by an attic story with allegorical figures standing in a perpendicular line with the columns. These figures represent Archæology, sculptured by Paris; Philosophy, by Largepied, a sculptor of talent deceased at an early age; Geography, by Marqueste; History, by Cordonnier; Mathematics, by Suchetet; Physics, by Lefeuvre; Natural Science, by Carlier, and Chemistry, by Injalbert. The two curved frontons on the right and left of the attic

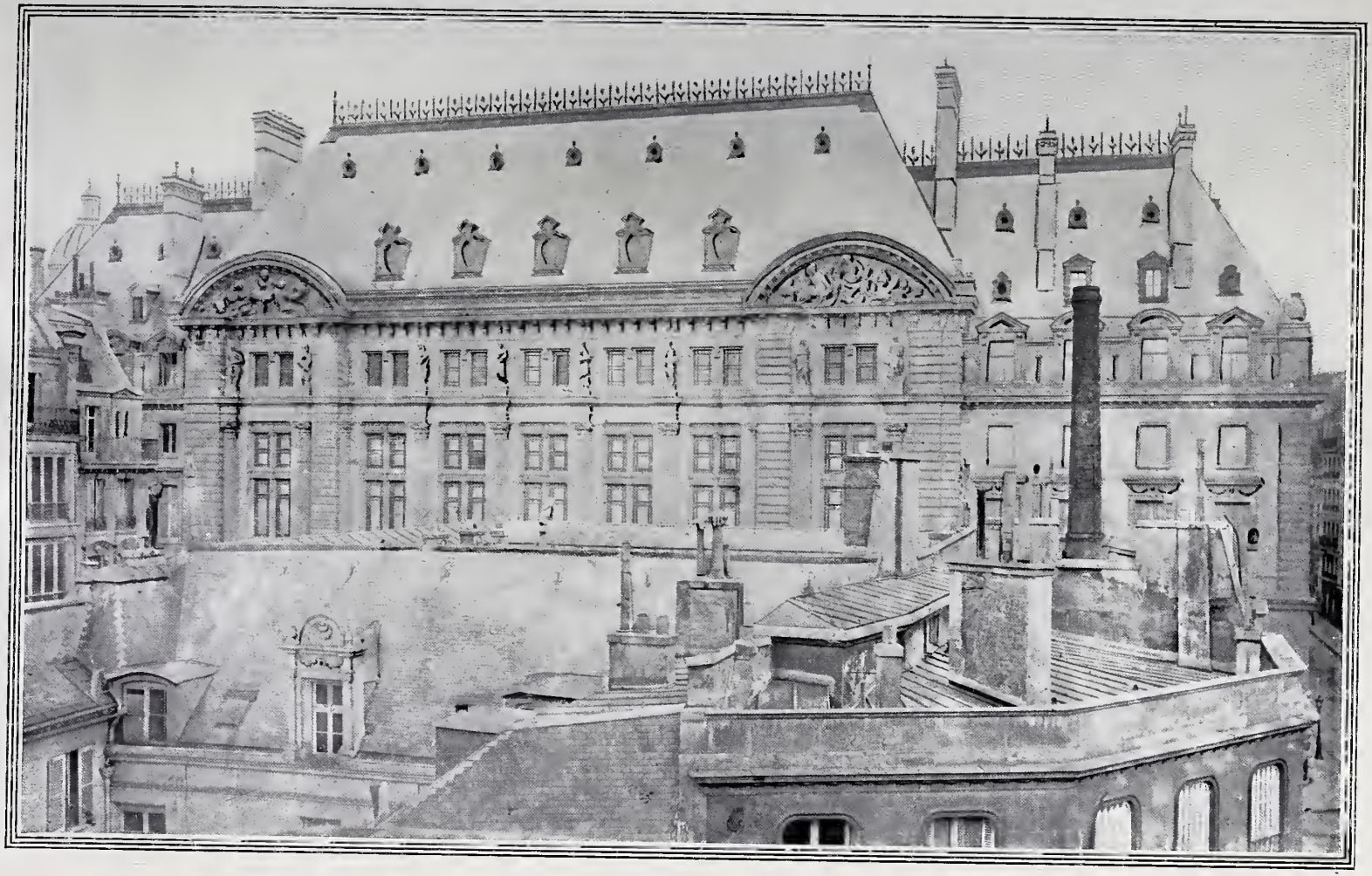


FIG. 1. PRINCIPAL FACADE OF THE NEW SORBONNE, RUE DES ÉCOLES, PARIS.

FIG. 2. VESTIBULE AT THE MAIN ENTRANCE TO THE NEW SORBONNE.

are ornamented with allegories of Literature and Science chiseled by Chapu and Mercié.

After crossing the threshold, we find ourselves in a vestibule 200 feet long by 12 feet in width (Fig. 2). The solidly supported vault is of sober architecture, but has a good appearance. Five wide arcades correspond with those outside. The last two form niches, in one of which is a statue of Archimedes, typifying Science, and in the other a figure of Homer, the supreme personification of Letters (Fig. 3). The former is by the deeply-regretted sculptor, Delaplanche, and the latter by Falguière. In front of us

Fig. 3. Statue of Homer in the Main Corridor of the New Sorbonne.—Sculptor, Falguière.

is the principal entrance to the grand amphitheatre. This entrance is closed by a gate of bronze and forged iron (Fig. 4).

Those whose recollections carry them back even but a few years remember, not without bitterness, the large amphitheatre of the old Sorbonne, in its desolate ugliness, its plaster figures of great men, and especially its cruelly narrow benches; and the sufferers of those days unite in a song of praise to M. Nénot when they take their places on seats comfortably provided with backs in the new amphitheatre, which is at the same time spacious, commodious and magnificent. This amphitheatre provides room for an audience of three thousand persons, distributed in what we

will call the orchestra (for comparison with the antique theatres is necessary here), on the benches, rising in tiers all round, and in the five galleries, and everyone present is able to listen to the lecturer in ease and comfort. The hall is forty meters wide from the bottom of one gallery to the other, and thirty-five meters long. Its cubic space is 13,600 meters. The heating and ventilation have necessitated a depth of twelve meters. Before the entrance of the audience, heated air is sent into the hall so as to warm the walls and form a zone of warm air extending to the central skylight. The ventilation hatches are then reversed and air at a maximum temperature of 16° Centigrade is sent into the hall. In this way the audience are sufficiently warmed, they breathe pure air, and yet if the hand was placed at an inlet it would experience a sensation of relative coolness (Fig. 5).

The arrangement of the great amphitheatre is ingenious and commodious, while its decoration is not less happy. The immense medallions in harmoniously softened tones which crown the five galleries bear witness to the delicate taste of their author, Galland, who, though dead, is not forgotten. They are allegories of Letters, Theology, the Sciences, Law and Medicine. In niches in the massive piers which limit the galleries, are seated, like a supreme *cænaculum* in stone, the great ancestors of the Sorbonne—Robert Sorbon, its founder and sponsor, by Crauk; Lavoisier, a victim of the Reign of Terror, by Dalou; Descartes, by Coutan; Rollin, the good educator, by Chaplain; Pascal, by Barrias, and Richelieu, the great Cardinal (more thoroughly at home here than any one else), by Lorson.

But the crowning glory of the new amphitheatre is the immense pictorial composition that occupies the whole of the end, displaying above the lecturer a calm, harmonious, and yet imposing vision of all science, all active thought, presiding as it were over every assembly and every human labor. It is not a fresco. Painting in fresco is a process, still familiar to the Italians, which it was attempted to popularize in France in the sixteenth century, but which was soon abandoned. It is, besides, a process which French painters could not employ. M. Puvis de Chavannes is only familiar with the ordinary processes of painting in oil—at least, those are the ones employed by him with such consummate skill. This allegory, the largest executed in one single piece during recent years, decorates and finishes off the architectonic work without jarring upon the rest in any way. The grave and even sad poetry which it exhales is admirably suited to an edifice consecrated to studies of the deepest and most laborious character. Thought engenders thought. There is an absence of laughter, and even of smiles, but we find in it that superb, heroic serenity which is the

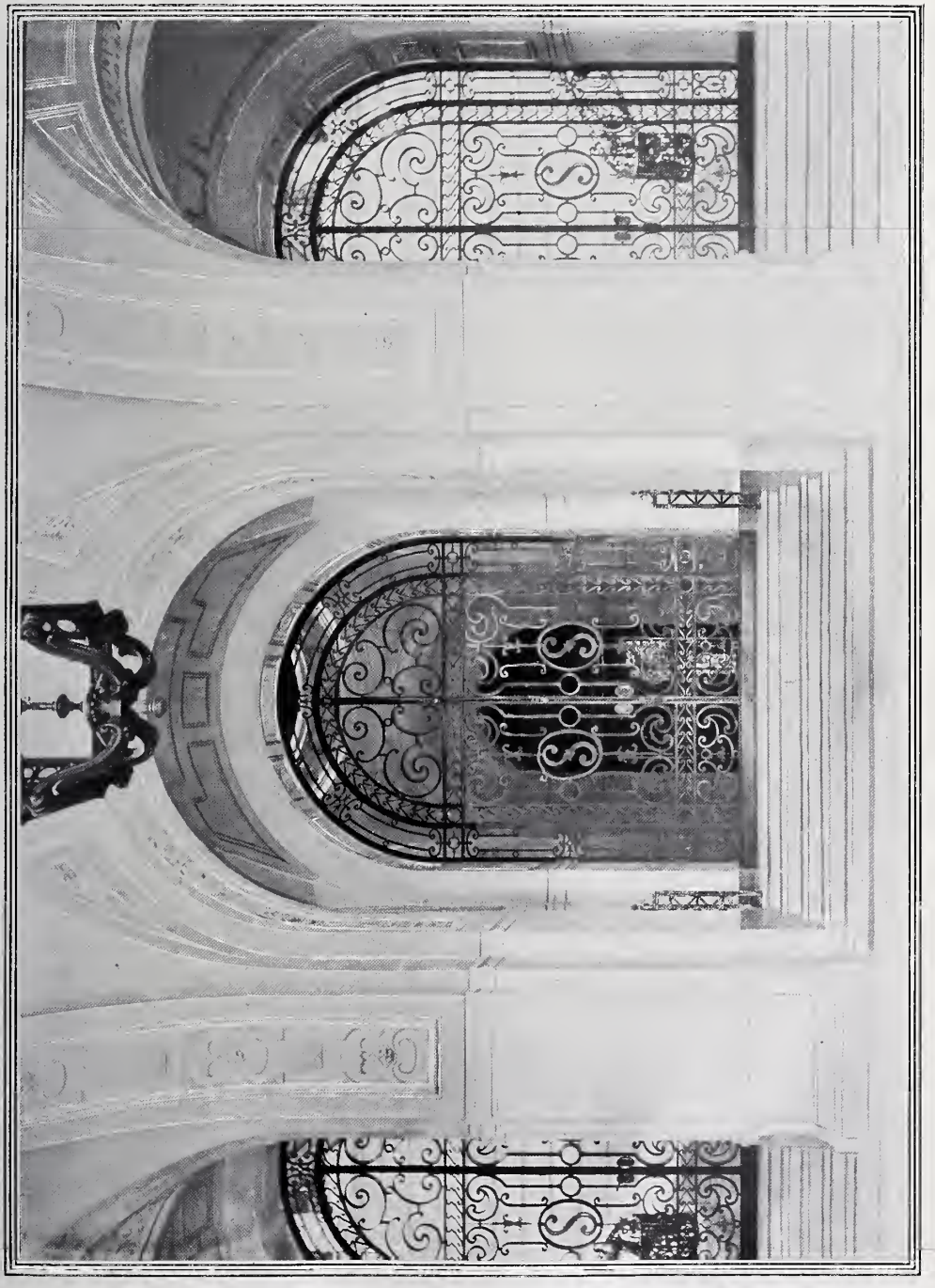


FIG. 4. GATE OF BRONZE AND FORGED IRON AT THE ENTRANCE TO THE AMPHITHEATRE.

reward of deep meditation and noble work. It may be cited as a model of intelligent decoration scrupulously appropriate to the surroundings—the frame, the very soul, if one may so speak, of the edifice which it was intended to ornament. The architecture remains predominant, as it should do, while the subordinate painting become greater and nobler, and justifies its presence, by its very fidelity to the only role proper to it.

This amphitheatre will be supplemented by a hall to be called the "Salle des Autorités," which will serve as a waiting-room for the great ones of the earth and the potentates of science who come to the Sorbonne on special occasions. This addition, however, is as yet only a project, the realization of which cannot take place until the grand courtyard shall have been completely reconstructed. In the meantime, the two staircases which lead symmetrically from the entrance to the grand amphitheatre must satisfy our dreams of magnificence (Fig. 6). Their construction, in skilfully dressed stone, is bold; the vaults, the step-grooves, the immense oval window which divides the top landing and lets a flood of light pass right down to the bottom—everything, in fact, is contrived to hold together without the aid of any deceptive metallic trussing. The forged-iron railing, set off with bronze chargings, is ornamented at intervals with the escutcheons of the French university towns. All around the upper landing there is a colonnade of monolithic shafts ornamented with Corinthian acanthuses (Fig. 7). The floor is in mosaic, while on the walls Flameng and Chartron have narrated the annals of the old Sorbonne and of French science—annals glorious and diversified above all others. The Sorbonne, which, up to the time of the Revolution, was a school of Theology, condemned Joan of Arc and would have burnt her a second time if it had been possible. It also condemned several famous books which were suspected of heresy, and intervened in the bitter and sterile quarrel between Jansenism and Molinism. But, on the other hand, the Sorbonne extended a welcome to the first printers and allowed their presses to be put up in its cellars. It gathered within its walls thinkers and writers, such as Rabelais, Amyot, Ramus and Montaigne. The great cardinal thought it worthy of his solicitude, and had it rebuilt, he himself laying the foundation stone. Later on, widening the circle of studies to which it was devoted during the earlier period of its existence, it had as masters such brilliant lights as Cousin, Arago, Cuvier, and others too numerous to mention. The historical scenes depicted on these walls denote an intelligent comprehension of the past, and some of them show a thorough understanding of decorative effects.

The Council Room occupies almost the whole of the first floor on the side of the rue des Ecoles. M Nénot wished it to be regally

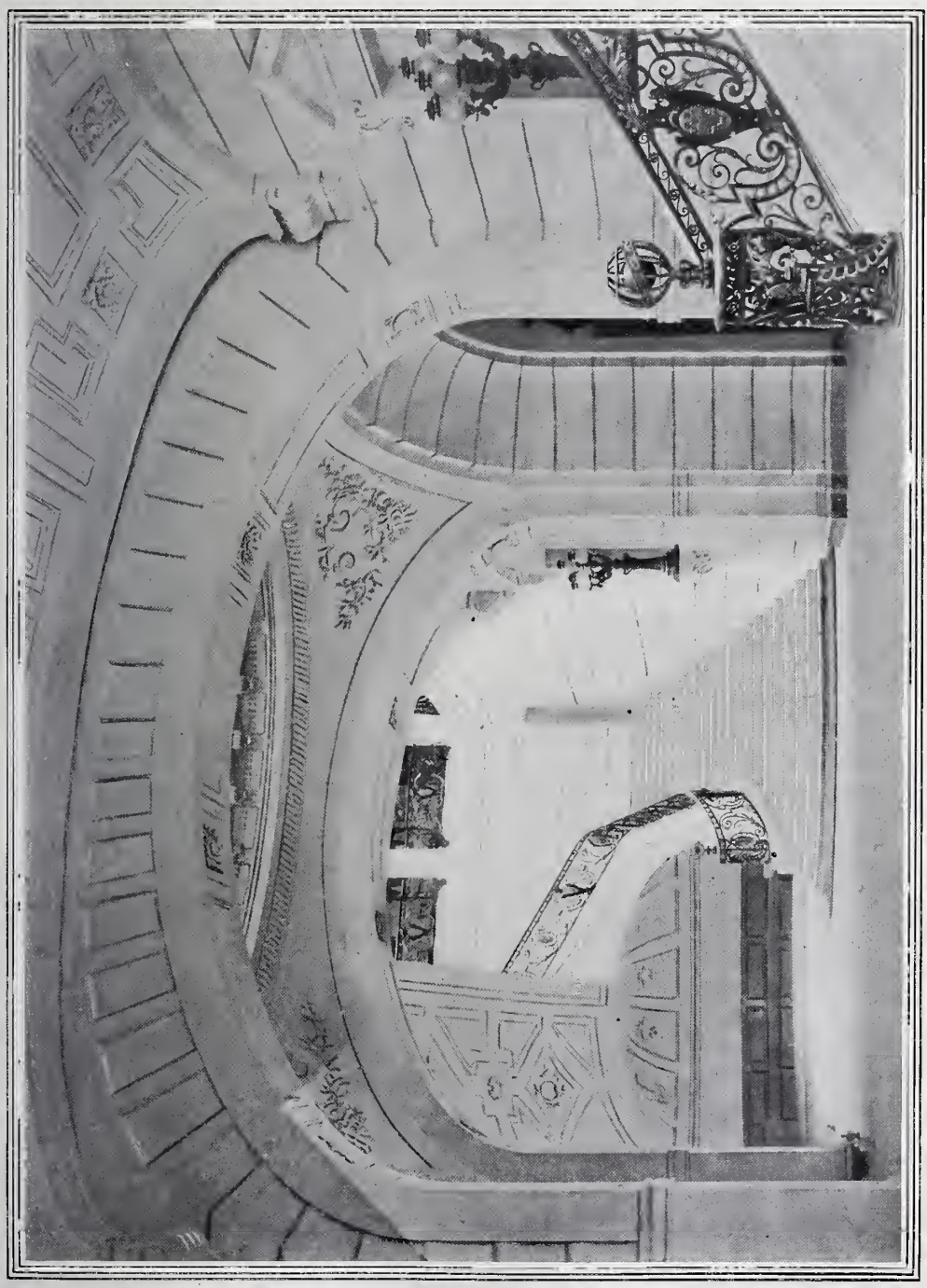


FIG. 5. THE TWO STAIRCASES THAT LEAD SYMMETRICALLY FROM THE ENTRANCE OF THE AMPHITHEATRE.

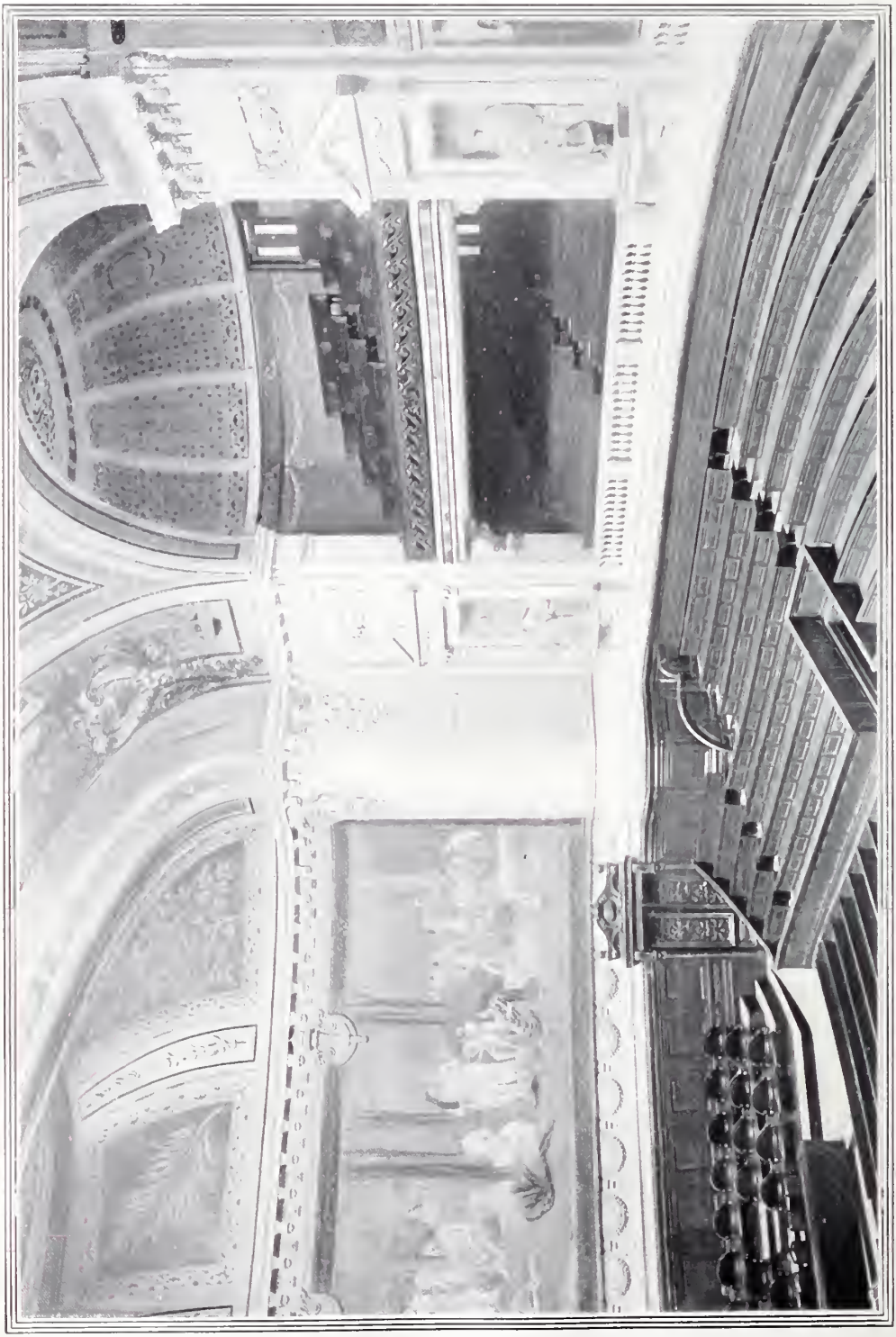


FIG. 6. THE AMPHITHEATRE OF THE NEW SORBONNE, SHOWING A PART OF THE MURAL DECORATION BY PUVIS DE CHAVANNES.

FIG. 7. "ALL AROUND THE UPPER LANDING THERE IS A COLONNADE OF MONOLITHIC SHAFTS ORNAMENTED WITH CORINTHIAN ACANTHUSES."

sumptuous. The immense ceiling is divided into compartments in the Renaissance style. On the long wall, which extends opposite the lofty windows, are grouped, under imitation colonnades, the high priests of instruction. They are all portraits, skilfully and brightly executed by Benjamin Constant. Prometheus bound, representing the past, and Prometheus unbound, representing the future, form a frame to this learned assembly.

From this spacious apartment one reaches the committee-rooms, to whose solitude animation has been imparted by Wencker and

FIG. 8. TOMB.

Designed by M. Nénot.

Lerolle. A small vestibule, soberly decorated in the Louis XVI. style, gives access to a large dining-room. Science is not averse to feasting in grand pomp on occasions. Another committee-room has already received some very remarkable paintings, which will have great historic value, for in them L'hermite has represented, ideally gathered together for experiments in physics and vivisection, Sainte-Claire Deville, Claude Bernard, and all their best known pupils.

The rector occupies, or rather will occupy, for the premises are not yet complete, a set of rooms arranged in the Sorbonne buildings, but yet practically distinct therefrom. Clairon has begun the pictorial decoration and Olivier Merson will finish it.

All that part of the Sorbonne which we have just described constitutes what may be called the state apartments. We now enter the more private portion, the portion where the principal work is done. Along the rue Saint-Jacques are situated the examination

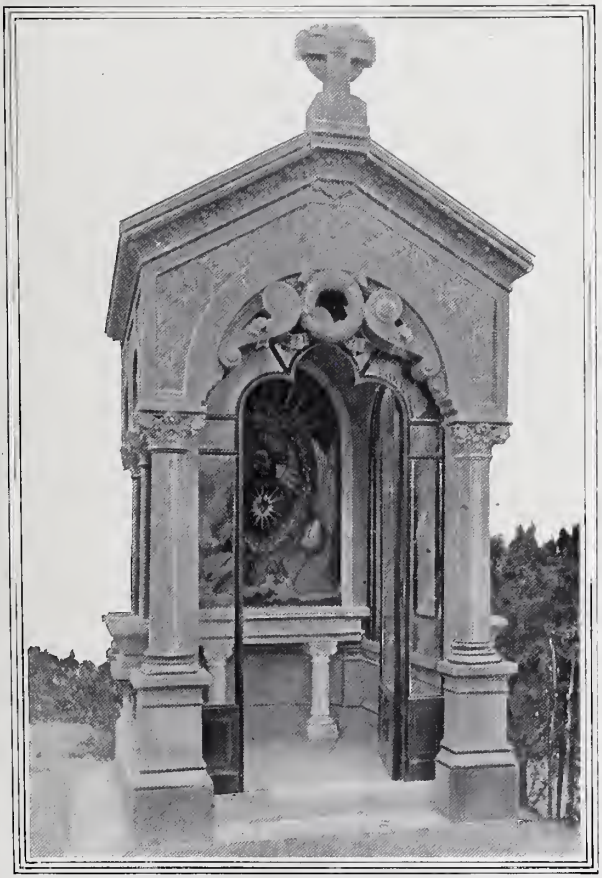


FIG. 9. TOMB.

Designed by M. Nénot.

rooms, running one after another, and there, too, is the still unfinished Amphitheatre of Letters, a large elliptical hall which will easily seat over seven hundred auditors. Two smaller amphitheatres will form as it were satellites of the large one.

One of the competing plans for the reconstruction of the Sorbonne proposed to turn the chapel into a library. Happily this singular idea was rejected. It is in the wing which we are now ex-

FIG. 10. PRIVATE RESIDENCE ON RUE DE LÜBECK. PARIS.
M. Nénot, Architect.

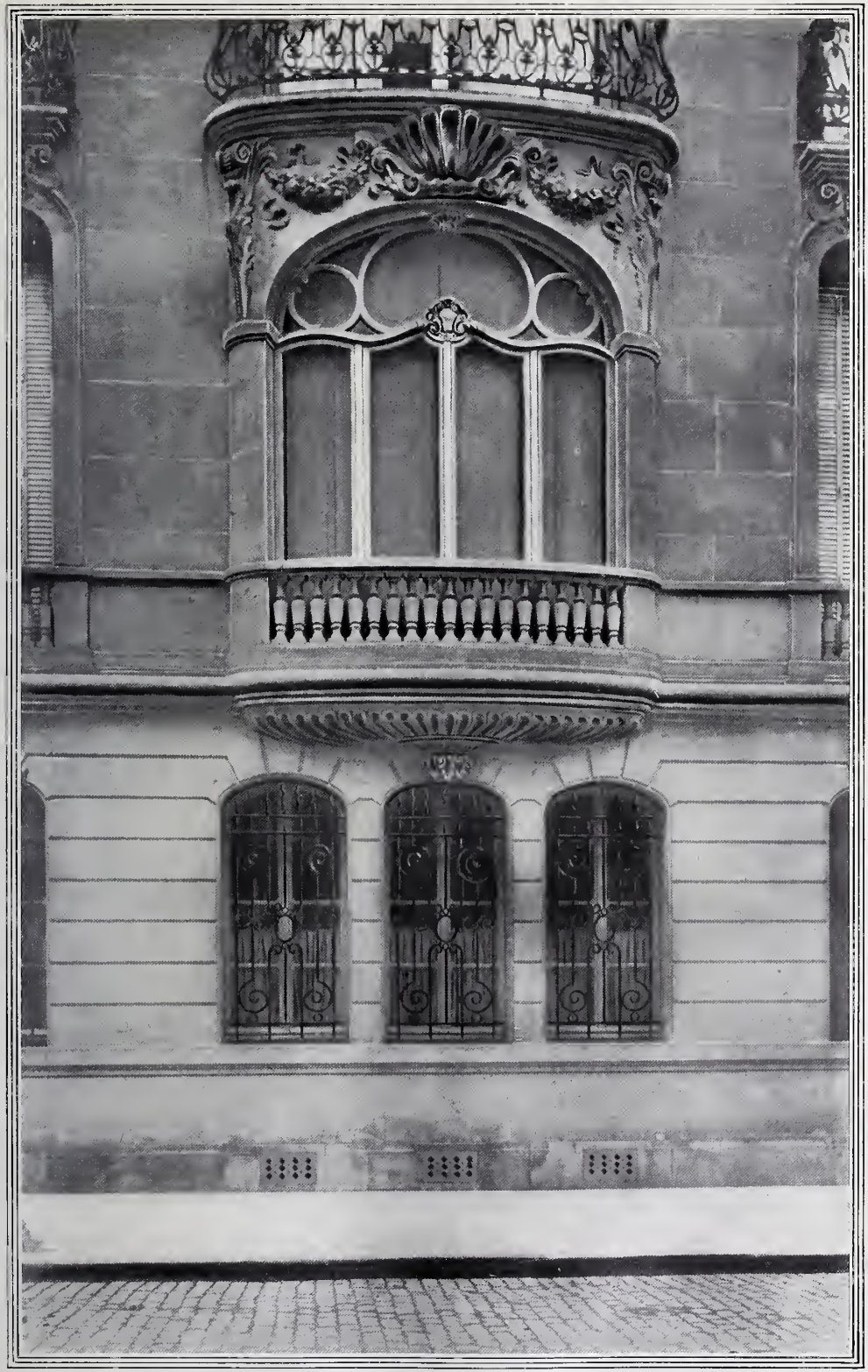


FIG. 11. DETAILS OF THE FAÇADE OF A PRIVATE RESIDENCE ON RUE DE LUBECK, PARIS.

M. Nénot, Architect.

amining that M. Nénot is preparing worthy accommodation for the unceasing inflow of books. He is providing room for at least three hundred thousand volumes, and shelves will be put up for this number. The reading-room, sixty-two meters long by ten meters in width, will only contain the books lent to readers. There are precedents for this distrustful arrangement. For instance, the very

FIG. 12. COURT OF THE DWELLING ON RUE DE LÜBECK, PARIS.

M. Nénot, Architect.

fine library at Grenoble, the work of the eminent architect Questel, can only be entered by the curators, readers being kept scrupulously at a distance from it. We certainly do not look favorably on such a system. In our opinion, books ought to be the prime element in the decoration of a reading-room, as they are in all the old libraries, as Lalerouste wished them to be in the Sainte-Genevieve library, and as they are in the Bibliothèque Nationale. The purpose of a

great edifice should reveal and affirm itself in everything, down to its very ornamentation.

Literature will be spaciously and grandly lodged at the new Sorbonne. This is proper, although it was not absolutely necessary. A very modest hall was sufficient for Quinet, Michelet, Cousin and many others not less illustrious. Abelard taught in a cloister, and the garden of Academus was good enough for Plato to teach in. But it is not the same with Science, which is essentially encroaching, exacting and recklessly extravagant. The arranging of the various departments devoted to science caused the architect to

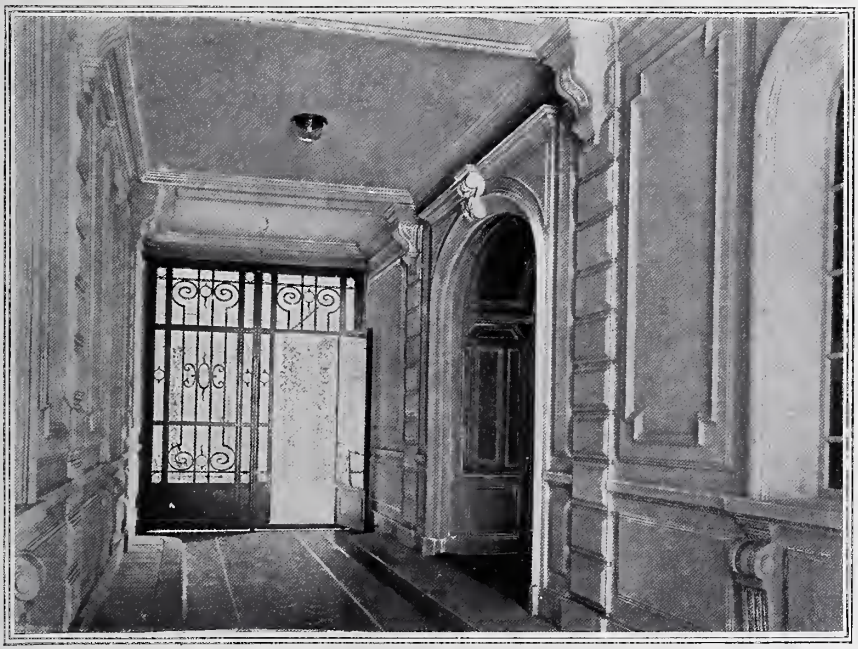


FIG. 13. VESTIBULE ENTERED FROM THE COURT OF THE PRIVATE DWELLING ON THE RUE DE LÜBECK, PARIS.
M. Nénot, Architect.

pass some restless nights, for no sooner had the plans been drawn and building operations commenced than new requirements were discovered; hitherto unthought-of laboratories were demanded, and it was even found necessary to erect a tower fifty meters high—as high in fact, including the underground part, as the towers of Notre Dame. The physicists asked for this and they got it. In another tower, visible to passers-by in the rue Saint-Jacques, there is an observatory where budding astronomers will serve their apprenticeship to the telescope. Nowhere was M. Nénot's ingenuity so largely called into requisition as in this intricate domain of science, or rather, of the sciences. Some wanted daylight and others dark-

FIG. 14. MAIN VESTIBULE TO THE DWELLING ON THE RUE DE LÜBECK.

Designed by M. Nénot.

FIG. 15. GRAND STAIRCASE LEADING FROM THE MAIN VESTIBULE OF THE PRIVATE DWELLING ON THE RUE DE LÜBECK.
M. Nénot, Architect.

ness. Some required aerial perches and others asked to be accommodated with deep cellars, while all asked for gas, an abundance of water, compressed air, mercury baths, and so forth. It was necessary to provide independent rooms for the masters, common rooms, capable of being divided up, for the pupils, and special laboratories for the preparers or for learned visitors to whom the Sorbonne extends its hospitality. Physics need apparatuses that are not used by chemistry, and the latter produces evil-smelling vapors which have to be carried off. Botany requires a hot-house, which is certainly more agreeable: it is a science of sweetness and peace. Physiology, more cruel, tortures frogs and rabbits, dogs and guinea pigs, and therefore must have kennels, stables, etc. Those creatures, called by the great Michelet our inferior brothers, have to pay with their certain sufferings for our very uncertain cures.

The photographical laboratories are especially complicated and curious. It is there that M. Lipmann juggles with the sunshine and fixes the colors, which until recently had resisted all attempts to seize them.

In summarily describing this abode of many sciences we must not omit to say that art has not been overlooked. Montenard, that painter who is so enamored of sunlight, has pictured in the Geology amphitheatre a sweetly charming corner of Provence. The less-favored Chemistry amphitheatre displays on the broad wall above the lecturer's chair what seems to be a delineation of the multicolored vapors that emanate from chemical retorts. It is affirmed to be a picture by M. Besnard representing Death giving birth to Life; but for M. Besnard's sake as well as for M. Nénot's consolation, we refuse to believe it!

Thus, the whole of this portion of the Sorbonne, from the apse of the old chapel as far as the principal door of said chapel, on the rue Victor Cousin, belongs to Science, and the arrangements and fittings, although not yet complete, show on the part of the architect, or, to use an expression employed in the Middle Ages and never more appropriate than here, the "master of the work," an amount of care and attention that is quite remarkable. Truly, one must be learned in every science, like Pico della Mirandola, in order thus to be the servant of, and provide a fit dwelling-place for all the sciences!

The School of Charters required only a very modest lodging, and M. Nénot had little trouble in giving it suitable accommodation in the immediate neighborhood of the chapel, on the spot formerly occupied by the Faculty of Theology.

The old buildings that are still standing on the rue de la Sorbonne will soon disappear and the entire reconstruction will then be complete. It is our duty, however, to record the great care that M.

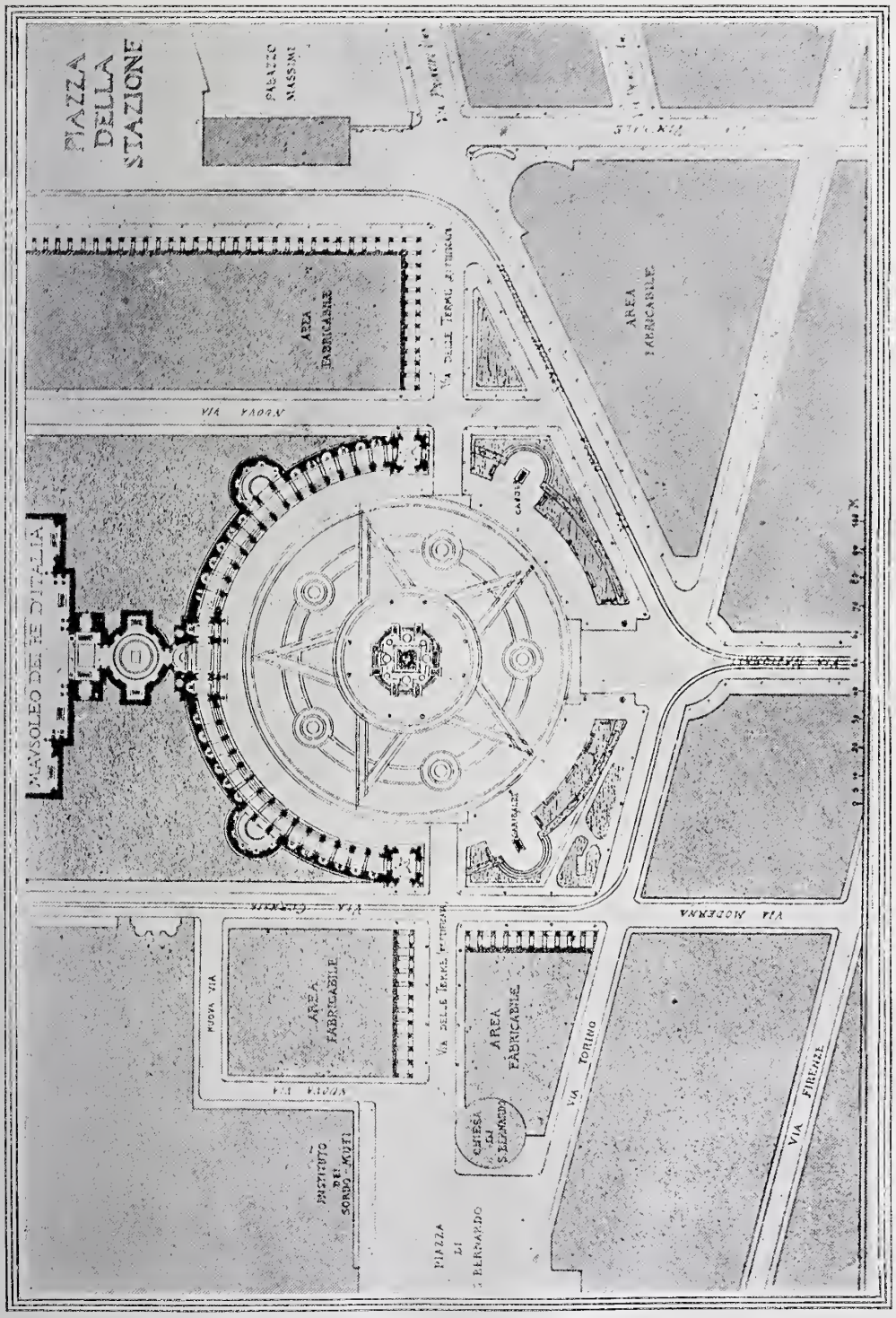


FIG. 16. PLAN OF THE PROPOSED MONUMENT TO KING VICTOR EMMANUEL I. OF ITALY.

M. Nénot, Architect.

Nénot is taking, to his infinite credit, to ensure the preservation, as far as possible, of the remains of ancient buildings. In the early stages of the works, when the houses on the rue Saint-Jacques were being pulled down, the excavations brought to light some cellars dating back to the thirteenth century, which M. Nénot had striven hard to preserve. The chapel, a remarkable work by the architect Lemercier, has been the object of M. Nénot's special care. He has caused to be sealed more solidly than ever the metallic box containing Richelieu's head, which is all that remains of the great cardinal's desecrated figure. This desecration took place during the dark days of the Reign of Terror. Lenoir, curator of the museum of French historical relics, was unable to prevent it, although he literally covered Richelieu's statue with his own body, and even received a bayonet wound in the struggle. Certainly Richelieu's monument, which was by Girardon and constituted one of the masterpieces of French statuary, deserved this display of heroism in its behalf. We wonder whether M. Nénot would be capable of doing as much. We trust so. In the meantime, while waiting for an opportunity to show his courage, he has taken care of the fine wooden doors on the rue Saint-Jacques, and has already found a good place for one of them. The other will follow. The principal decorative features of the old courtyard will reappear in the new one, and we shall again see the medallions of benefactors and the sun-dial with its chariot of the god Phoebus. The steps which still divide this courtyard and make up for the difference of level will be kept. The inner front of the chapel will thus keep its pedestal and be more than ever the most majestic feature of the scene.

If old Robert Sorbon could now return to life he would certainly fail to recognize the asylum in which lodged "the congregation of the poor masters of the Sorbonne." The great cardinal himself would have some difficulty in recognizing, after these extensions, the edifice which he ordered his architect Lemercier to erect. This is the inevitable fate of things human, and especially of those that are perpetually advancing, such as things related to science. M. Nénot's work may not be an everlasting one, but he will have striven nobly to serve this century of rapid scientific progress, and the glory of his labors will remain to him enduringly.

We cannot take leave of M. Nénot without saying a few words about some of his other work—less important, no doubt, but highly creditable nevertheless. The mansion which he constructed in the rue de Lubeck, Paris (Figs. 10 and 11), recalls the excellent types of French architecture which the seventeenth and eighteenth centuries have handed down to us. The vestibule and the grand staircase (Figs. 14 and 15) are broadly conceived. The stooping figure of Venus which welcomes the caller is by no means calculated to de-

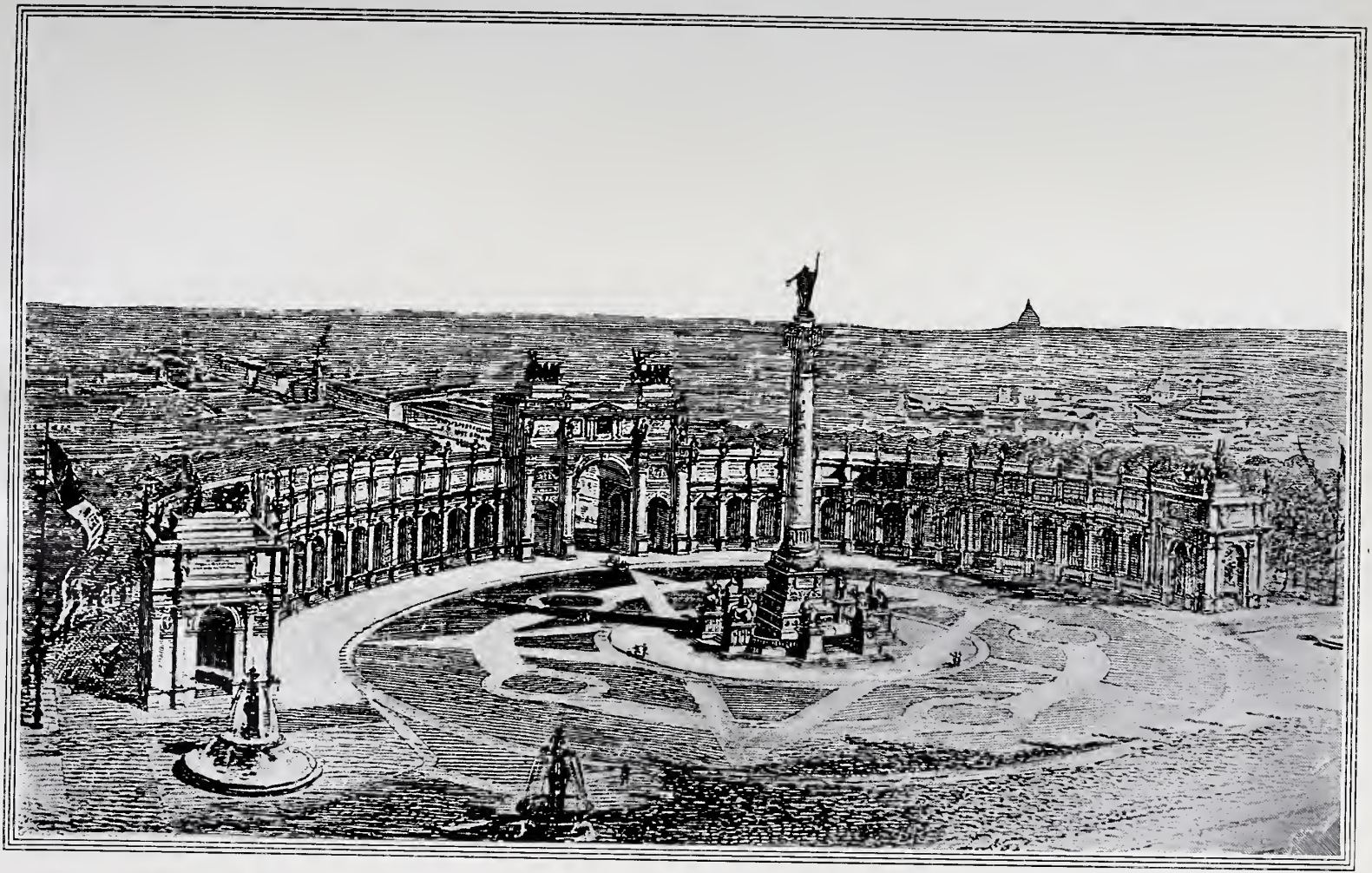


FIG. 17. SKETCH OF THE PROPOSED MONUMENT TO KING VICTOR EMMANUEL I. OF ITALY, WITH APPROACH AND SURROUNDINGS.

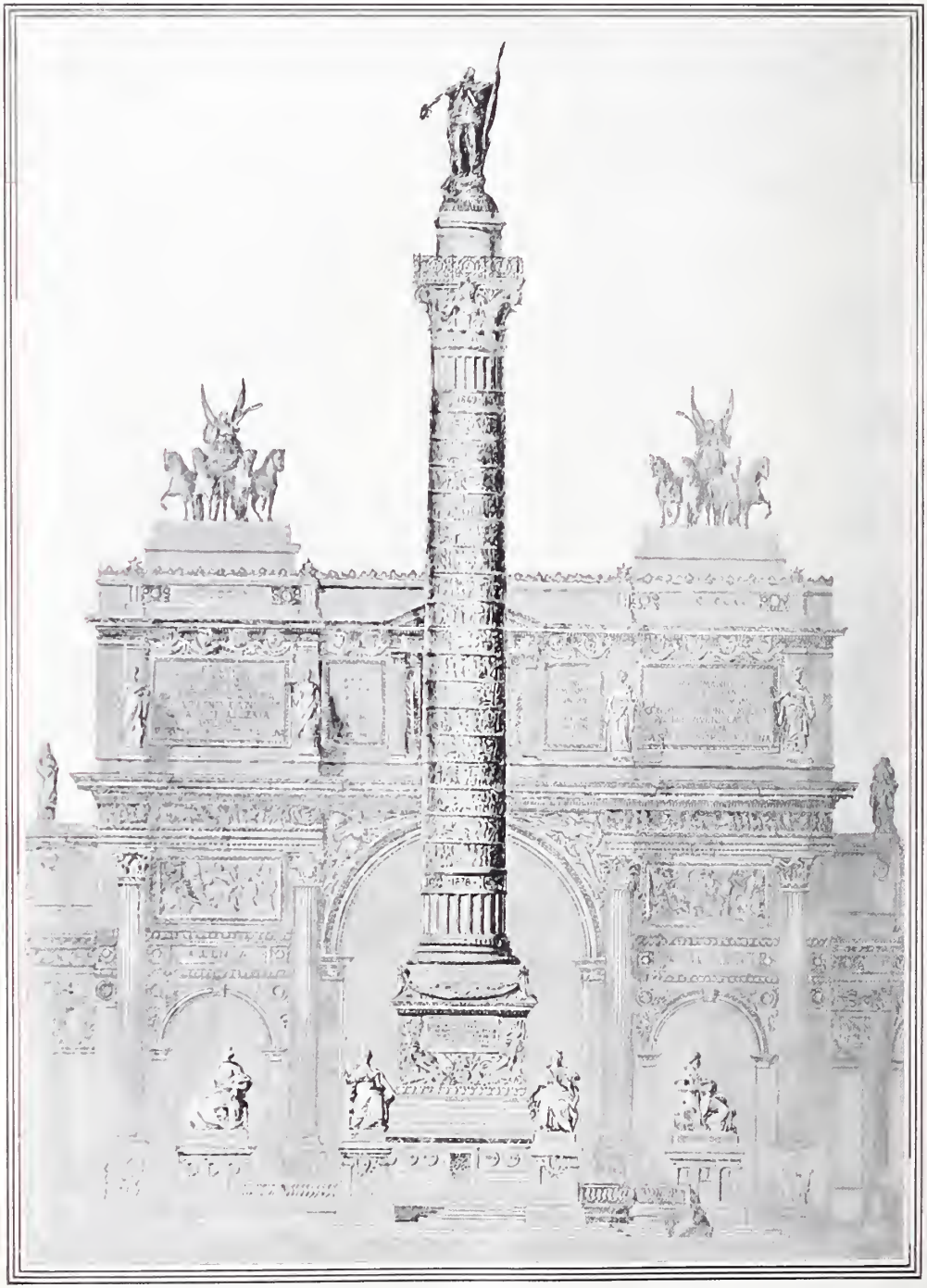


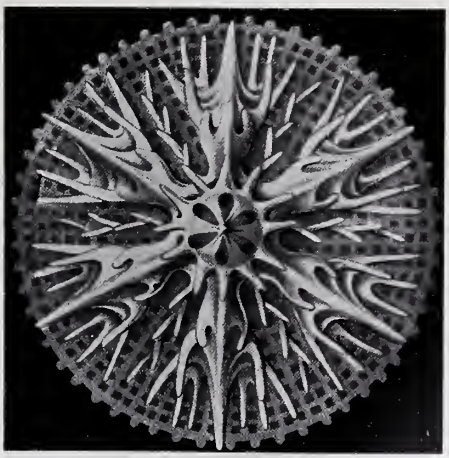
FIG. 18. ELEVATION OF THE MONUMENT AND TRIUMPHAL ARCH PROPOSED TO BE ERECTED TO KING VICTOR EMMANUEL I. OF ITALY.

press him and make his visit a dull one: on the contrary, it is likely to enliven him. The ancient Romans sometimes placed at their thresholds the mosaic figure of a savage dog and the inscribed warning: *Cave canem*, beware of the dog. At other times they put up the simple word Salve, greeting! which was certainly more amiable, although not so much so as the employment of Aphrodite herself to smile on one's friends and bid them welcome.

The dead are usually easily satisfied clients, but we know of a certain grief-stricken family who refused the spot first selected for the defunct on the ground of the horizon being too limited, and of there being no view from the point! M. Nénot's departed customers are doubtless less difficult to please; besides, he has lodged them in the best possible manner. The ancient Greeks themselves would, we believe, have looked approvingly on those Ionic columns which ornament the tombs here depicted (Figs. 8 and 9).

As we have already said, M. Nénot has had in his lifetime one beautiful dream, namely, the monument to King Victor Emmanuel (Figs. 16, 17 and 18). Assuredly, M. Nénot treated it well; porticos, a column fit to rank with those of Trajan and Antoninus, and a triumphal arch surmounted by two chariots of victory (the great Caesar himself had but one), and quite an array of statues. What a consecration! What an apotheosis! With this dazzling apparation, which was only a mirage, we will close. The subject of this article has not been able to write in marble the name of a king, as he hoped to do, but he has at least engraved on the public mind the name of Nénot.

L. Augé de Lassus.



NATURAL ORNAMENT.

FIG. 1. AN APARTMENT HOUSE IN PARIS DESIGNED BY M. LAVIROTTE AND CONSTRUCTED ABOVE THE SECOND STORY OF BRIQUE ARMÉE.

A NEW FRENCH METHOD OF CEMENT CONSTRUCTION.—PART I.

THAT building materials have a commanding influence upon architecture itself is an axiom which ought never to be forgotten, and yet it is one which is overlooked every day. The immense blocks of stone used in ancient Greece, and the stones of lesser dimensions extracted from French quarries, have furnished, the former those massive walls, those architraves and those cornices of the Greek temples, and the latter those lighter walls, that rib-vaulting and those flying-buttresses which we find in Gothic cathedrals. Neither the Italian Renaissance, nor the neo-classic, understood the deep-seated reasons which governed the existences of the architectural styles. They took certain forms, believing that these forms existed independently of the materials of which they formerly expressed the essence, and the frontons of temples made their appearance as window crownings.

One would think that the employment of iron in architecture would have brought about a revolution in forms, as it has done in processes of building, but as a matter of fact this has not been the case, for, leaving on one side the big glass-roofed halls of railroad stations, public markets, warehouses, etc., where iron stands forth in its true colors, we find that, nine times out of ten, the chief aim of the architect has been to hide the iron he has made use of, and give his edifice the appearance of a building in stone. Even in the United States, where the employment of steel has given rise to such knotty problems and such clever solutions thereof, architects, in the majority of cases, have not been able to bring themselves to proclaim to the man in the street that the skyscraper has a framework of steel: they have given these twenty-story edifices the aspect of houses built of brick and stone, which is an absurdity. (This remark does not apply to an extremely interesting building in

Bleecker Street, New York, designed by Mr. Louis Sullivan, the structure of which is not disguised, but, on the contrary, emphasized.)

After the introduction of iron and steel, now more than fifty years ago, it seemed as if architecture, enriched with a new material, would not undergo another transformation for some centuries to come; but time has not the same value in our day as it had formerly. A greater number of discoveries were made during the nineteenth century than in the thirty preceding centuries, and if we continue at a corresponding rate it may well be asked what will be left for our successors to discover. All that we shall bequeath to them is just the trouble of living!

Yet now a new process has been used during the last few years, chiefly in the building of public works, such as harbors, canals, factories, and so forth. This new process consists in the use of what the French term *ciment armé*, which is essentially composed of cement or concrete with iron wires embedded therein. Excellent results have been obtained. The conglomeration thus formed possesses remarkable strength; it does not deteriorate by contact with water or damp; the iron, buried as it is in the cement, never rusts, and, what is more, gets rid of any rust there may be upon it.

The use of *ciment armé* in the above directions having given satisfaction, a desire was felt to apply it to architectural purposes, but it seems that the new material puzzled architects a good deal. They wondered how they ought to treat the newcomer, which was not stone, nor iron, nor cement. One can easily understand their embarrassment.

We propose to examine the very interesting uses to which *ciment armé* has been put in France, from the architectural point of view. The new material has a great future before it, but if architects wish to produce work that shall really be architecture, it is necessary that they reflect before taking hold of it. With the object of providing them with food for meditation on this subject we are going to describe and illustrate here some buildings, public and private, in *ciment armé*.

* * * * *

Ciment armé lends itself to all forms. It can be moulded so as to present the appearance of a mediaeval bond or a Louis XIV. one; Gothic foliage or Roman ovolos, dentils and masks. Is it expressive in itself? This is a difficult question; but we may affirm, *à priori*, that there is nothing to be gained by copying forms invented for other materials.

In designing the house front here shown (Fig. 1) the architect, M. Lavirotte, realized the truth of the axiom which we have just

FIG. 2. AN APARTMENT HOUSE AT NO. 1 RUE DANTON, PARIS, DESIGNED BY M. ARNAND AND CONSTRUCTED THROUGHOUT OF CIMENT ARMÉE.

enunciated. He said to himself: "My material being a new one, my forms and my decoration shall be new likewise." He has certainly produced a work in "modern style." If his deeds were equal to his intentions his façade would be an excellent one; but the application is defective.

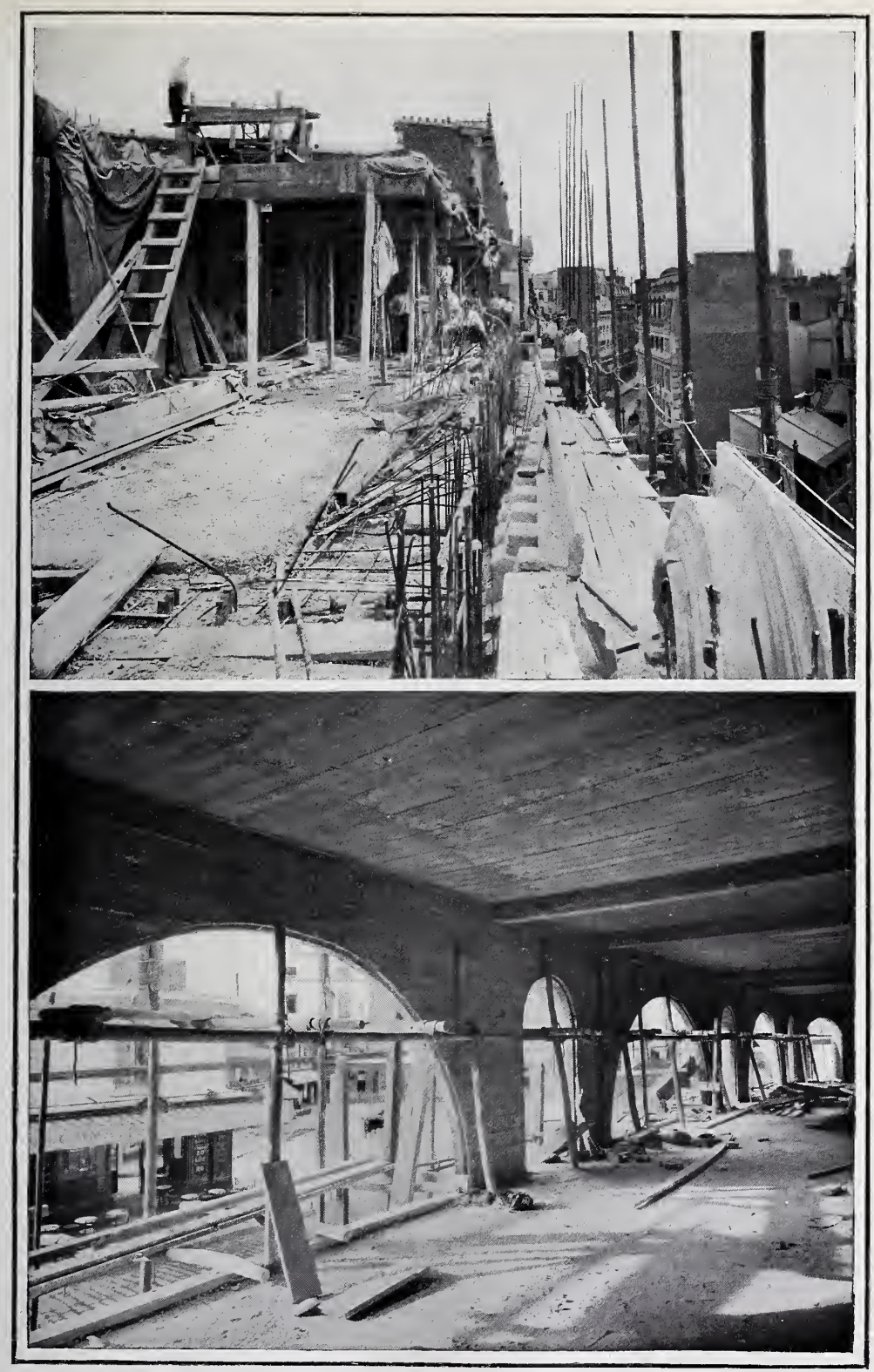
In the first place, this front is in two parts. Up to the first floor it is constructed of stone in the ordinary manner; from there upwards it is in *ciment armé*. The reason for this is not very clear. However, the upper stories alone interest us at the present moment. They are built of *brique armée*, a very ingenious way of proceeding to which we shall refer again in the course of this study. But the façade does not show this, the architect having concealed the structure of his building beneath a continuous revetment of sharp-fire enameled tiles. He has done this for the following reason. Sharp-fire enamel is a substance which is not affected in the least by damp, or heat or frost: as it is to-day, so will it be a hundred years hence. True it is expensive, but the architect thought that it was preferable to spend a certain sum at once and thereby avoid the constant expense which would be incurred to keep stone in good order. The use of sharp-fire enamel afforded an opportunity for polychromy, and this front is polychrome in the extreme.

Without quibbling about the architect's choice of colors, however, we are bound to criticise his decorative forms—not because they are in "modern style," but because they are irrational, and hence without any style at all. The enormousness of the decorative motives disconcerts us. If all this is not veneering, we should like to know the object of those Cyclopean forms—such, for instance, as the frames surrounding the third-floor windows, those bulky cornices, those massive brackets, the absurd crowning on the gallery of the fourth story, and the inordinately heavy frames round the fifth-floor windows? Why such a useless display of strength when the whole thing is only decoration? Let it be noted that I do not speak of the taste shown in the choice of these motives, nor of the puzzling design for the door, which does not rest on anything, swells out suddenly, is loaded at the top and becomes ornamental contrarywise; no, it is the conception of the ornamentation, the line of decoration adopted, which, considering the material used, I find inadmissible.

* * * * *

Turning to another house, also in Paris (Fig. 2), we meet with a more rational and more satisfactory utilization of the qualities possessed by *ciment armé*.

This building, constructed by M. Arnaud, and located at No. 1,

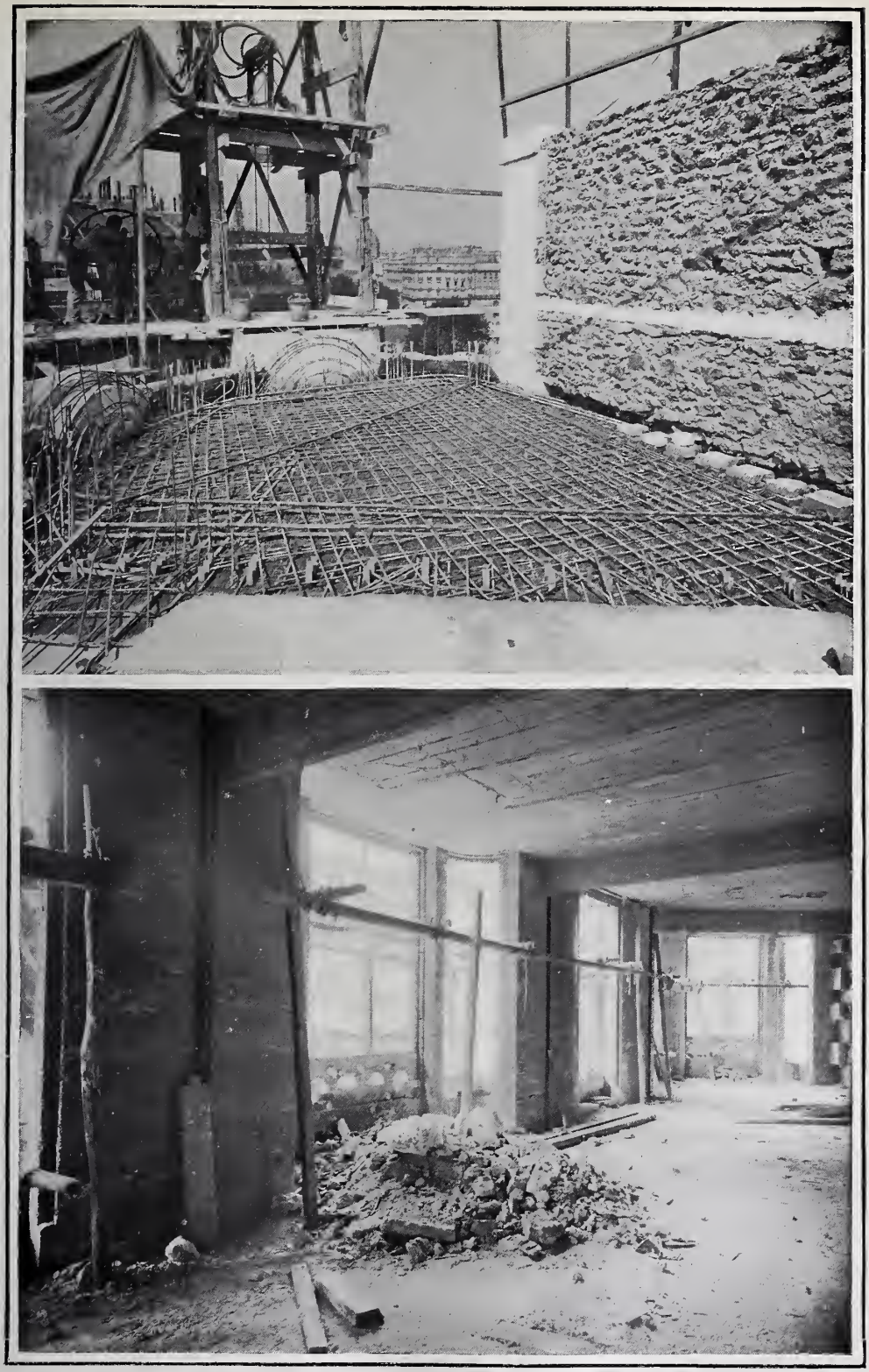


FIGS. 3 AND 4. THESE SHOW THE APARTMENT HOUSE AT NO. 1 RUE DANTON IN COURSE OF CONSTRUCTION. FIG. 3 ILLUSTRATES A MODEL FOR THE MOULD OF THE CORNICE ON THE SIXTH STORY. FIG. 4 SHOWS THE LARGE BAYS OF THE ENTRESOL.

Rue Danton, is interesting in more than one respect. To begin with, M. Arnaud has used *ciment armé* to the exclusion of other materials. Outer and inner walls, foundations and roof, staircase and ceilings; every part, in fact, is in *ciment armé*. In the next place, M. Arnaud calls upon this material to render the exact kind of service it is capable of rendering, and this enables him to economize space. It should be stated that the exclusive use of *ciment armé* as the building material for a house, according to the Hennebique process, does not effect a saving in money; there is, however, a considerable saving in ground, as will be seen, and this is a point which cannot fail to interest New York architects, who are so often obliged to build upon narrow strips of land.

The piece of ground in question is an irregular parallelogram, with a frontage of 27m. 90c. on the Rue Danton, and a blunted corner on the Place St. André des Arts, measuring 3m. 50c.; it widens gradually until at the back it has a depth of 15 meters. The difficulty of placing a set of convenient rooms on such an area as this is apparent. With the usual 50-centimeter walls the corner on the Place becomes useless. The municipal regulations require that party walls shall be built of stone and have a thickness of 50 centimeters. On the front, however, M. Arnaud was free to employ *ciment armé*, and to limit his walls to a thickness of 20c.

It has been calculated that, thanks to this manner of proceeding, and also to the thinness of the partition walls and the inside tambours, the architect has saved 10 square meters on each floor, which, for the nine stories of the building (counting the two underground), makes a total gain of 90 square meters—say 108 square yards. But this is not all. Thanks to the use of *ciment armé* for the floors, the architect has managed, whilst allowing the regular height of 3m. per floor, to give his house one floor more than the houses of Paris can have, for, as is known, the maximum height for houses is fixed by a police regulation at 31m. 30c. Thus the total gain is about 300 square meters, and this in a part of Paris where ground is worth $300 the square meter. This economy is wholly due to an intelligent utilization of the properties of *ciment armé*. The various photographs here given show the house in course of construction. After the iron wires have been placed in position the cement is poured in between planks. For the parts which have to take a special shape, wooden moulds are prepared, into which the cement is run. We produce a photograph (Fig. 3) of the mould for the cornice on the sixth story. Another photograph (Fig. 4) shows the large bays of the entresol, and another (Fig. 5), one floor between two stories, and (Fig. 6) one apartment. It is needless to say that a house built in this manner, without a single inch of wood, is absolutely fireproof.



FIGS. 5 AND 6. THESE REPRODUCTIONS ALSO SHOW THE BUILDING AT NO. 1 RUE DANTON IN THE COURSE OF CONSTRUCTION. THE UPPER ONE REVEALS THE FLOOR CONSTRUCTION BETWEEN TWO STORIES, AND THE LOWER ONE THE ROOMS OF AN APARTMENT.

As will be seen by our illustrations, M. Arnaud has resorted largely to corbels to make his rooms bigger. For the purpose of giving variety and relief to his front he has emphasized the profiles of the windows, piers, brackets, etc. An abundance of light reaches every part of the house.

A wall consisting of *ciment armé* lends itself to various kinds of decoration. There is an opportunity here for a Renaissance of those *sgraffitti* of which Germany, in the sixteenth and seventeenth centuries, made such frequent use, following in this respect the lead of Italy. Another way would be to cover the wall with sharp-fire enameled tiles. M. Arnaud has been very sparing of his decoration. A few enameled tiles on the first and fourth stories, between the windows, suffice to give a touch of color to the grey façade. It should be mentioned, moreover, that the owner of the house, M. Hennebique, who is the inventor of the process employed by M. Arnaud, desired that this building, in which he has his offices, should proclaim that it was constructed of *ciment armé* and that the new material which he was offering to the public sufficed in itself.

Jean Schopfer.

(To be continued.)

L'ART NOUVEAU.

[*"L'Art Nouveau"* is the name given by the writer of this article, M. S. Bing, to his establishment at No. 22 Rue de Provence, Paris, of which we reproduce a photograph of the principal hall. It is at this establishment that the first expositions of *Art Nouveau* have been held, and one can see there some interesting modern articles of the most varied kind—such as furniture, stuffs, jewelry, pottery, carpets, china, lamps, etc., etc. At the Paris Universal Exposition of 1900, M. Bing's exhibit of *Art Nouveau*—of which term, by the way, he is the creator and holds, so to speak, the copyright—was the most interesting one in its section, and the articles exhibited were purchased by the principal European governments in order to be placed in the national museums.—Ed.]

A FEW months ago I received by mail from the United States a prospectus issued by the inventor of a new machine—viz., "a machine for making *Art Nouveau*" (the last two words in French). I shall always regret not having preserved this precious document, or at least noted the name of its ingenious author; no doubt he would have been able to supply us with much information on the subject we are treating, since it has led him to the length of inventing a machine for turning out *Art Nouveau*.

After all, it is better, perhaps, that the name of my worthy correspondent should not be known, for he will thus serve as the incarnation of all those who form a fantastic idea of *Art Nouveau*—an idea based either upon certain extravagant criticisms they have read, or upon a view of those tentaculated, distorted, inharmonious objects which have been dubbed with this name in order to give them an "up-to-date" air. It is evidently from these criticisms and these objects that our inventor has acquired his knowledge, for in order to convey to his clients an exact notion of what the words *Art Nouveau* mean he adds this expressive definition: "French Twist."

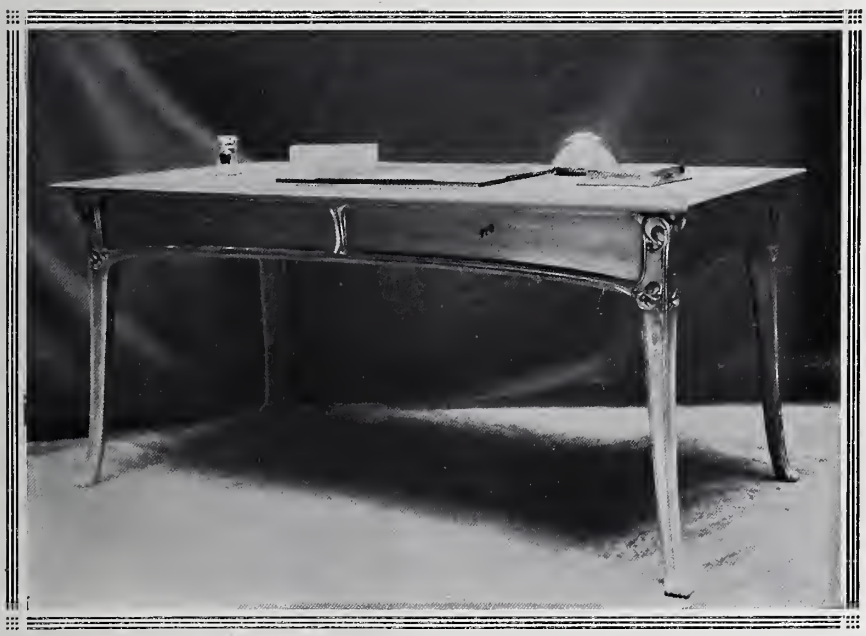
At the risk of displeasing the collectors of curious legends I seize the present occasion to relate the origin of this term *Art Nouveau*, upon which too much ridicule has been cast, and which, at the same time, has been exploited to wrong ends.

A word is nothing in itself. It chiefly represents the meaning which its author intended to give it. In the present instance this meaning has been entirely misunderstood by certain simple persons, misled by witty individuals who did not know what they were talking about. These clever people have managed to discover an intention to originate some sort of spontaneous generation in art, founded on æsthetics altogether invented—or fallen from the moon!

THE PRINCIPAL HALL IN THE BUILDING AT NO. 22 RUE DE PROVINCE, PARIS, DEVOTED TO THE EXHIBITION OF "ART NOUVEAU" WORK, AND FOUNDED BY M. BING.

L'Art Nouveau, at the time of its creation, did not aspire in any way to the honor of becoming a generic term. It was simply the name of an establishment opened as a meeting ground for all ardent young spirits anxious to manifest the modernness of their tendencies, and open also to all lovers of art who desired to see the working of the hitherto unrevealed forces of our day.

Thus the term was nothing but a title, a name, or, if you like, a sign, incapable of expressing in the two words composing it the idea which called it forth, the aim to which it tended. This idea, this aim, would be indicated more clearly—if the name of an establishment could extend to the length of a phrase—by the denomination: *Le Renouveau dans l'Art*—the Revival of Art. Even



A TABLE-DESK IN THE ESTABLISHMENT OF M. BING.

this might not suffice without commentaries. Let us try to fill the blank.

In certain branches of art, such as painting, for example, which has steadily continued its development in a normal and regular way, no revival was called for. It was only in relation to art as applied to decoration, to furniture, to ornamentation in all its forms, that the need of a new departure was felt. This department of art, in reality the most essential to man, being closely connected with his daily existence, had been at a standstill for nearly a hundred years. By a singular exception to the logical course of things, all the life had gone out of this section of human

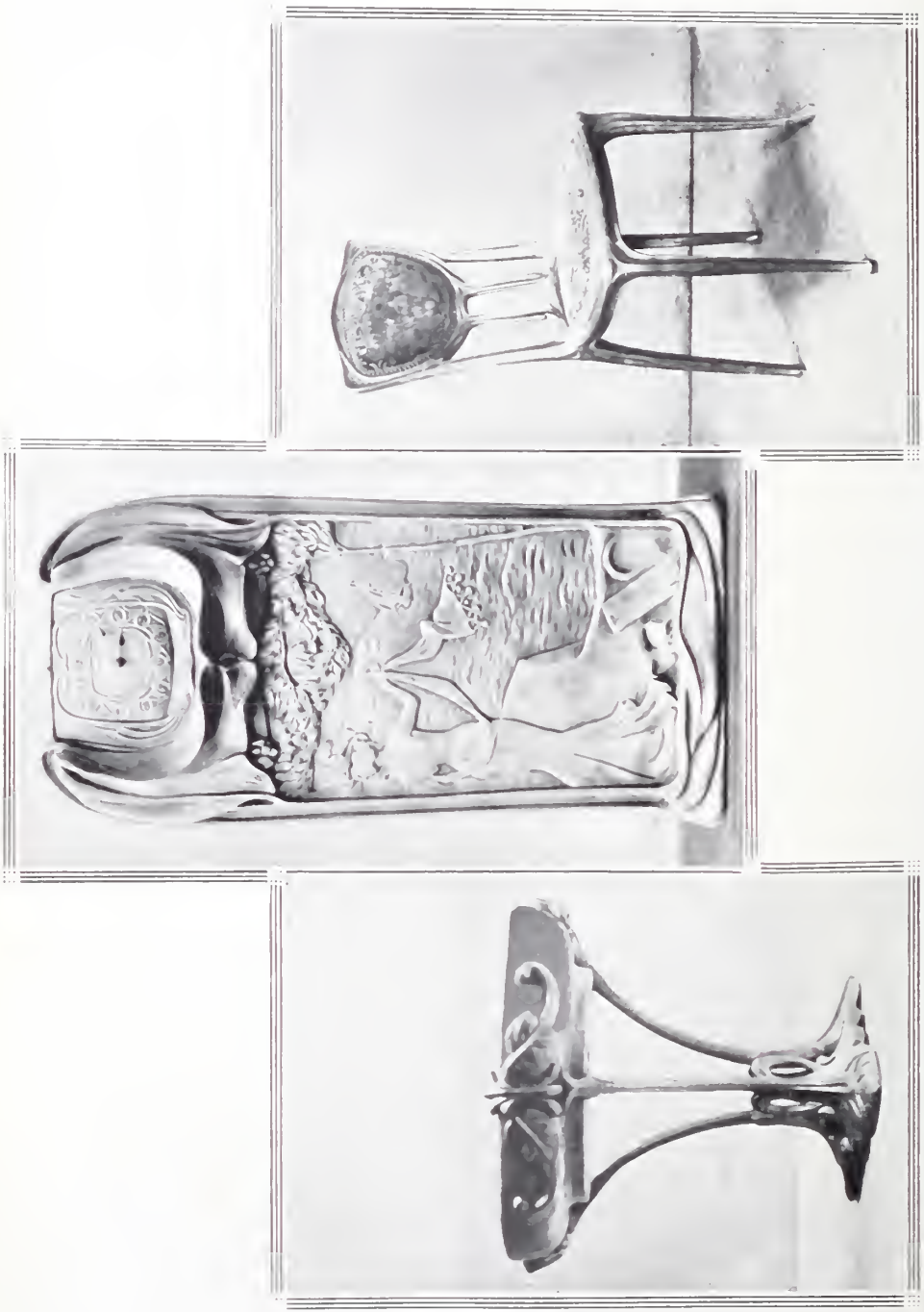
AN UPHOLSTERED CHAIR IN THE ESTABLISHMENT OF M. BING.

activity. It was not the repose of the Sleeping Beauty, for all around there was busy movement and constant progress, due to the quickening effect of a thousand scientific discoveries and the shake-up caused by social innovations of the most radical kind. Amidst this universal upheaval the decoration of the day continued to be copied from that in vogue in previous centuries, when different habits and different manners were current. What an astonishing anachronism!

It is difficult to conceive how several successive generations could have abandoned themselves to this inertia. However, it was impossible that the world should forever acquiesce in an avowal of such humiliating impotence. Little by little voices were raised in protest and signs of an awakening began to appear. What was lacking was a means of stimulating artists to new efforts, of establishing some connection between isolated endeavors, and of providing a suitable place for displaying the latter and submitting them to the judgment of the public.

In the beginning I confined myself to this rôle of intermediary —of standard bearer in the service of the good cause. Soon, however, the disillusion came. The productions gathered together in my establishment had a chaotic appearance. Many were faulty in conception, due to inexperience: all suffered in their aspect from a want of cohesion, due to extreme diversity of origin. The general defect was a premeditated contempt for that quality which is indispensable in a work intended to rest the eye—simplicity.

It was evident that the future of this new-born movement was in great danger. The only way to save it from total collapse was to endeavor to make it follow a fixed direction, carefully marked out; to keep it within the bounds of sobriety and good sense, avoiding the extravagances of exuberant imaginations and relying for its salvation upon these two fundamental rules. *Each article to be strictly adapted to its proper purpose; harmonies to be sought for in lines and color.* It was necessary to resist the mad idea of throwing off all associations with the past, and to proclaim that, on the contrary, everything produced by your predecessors is an example for us, not, assuredly, for its form to be servilely copied, but in order that the spirit which animated the authors should give us inspiration. Things which we call ancient were supremely modern at the time they were made. To none of our ancestors would it have occurred to look backward for the purpose of repeating what artists of former periods had invented to suit the habits and customs of their own day; but neither would he have tried to do anything more than take up the work at the point where his predecessor had left it, and in his turn develop it logically to meet the general spirit of the age in which he was living.

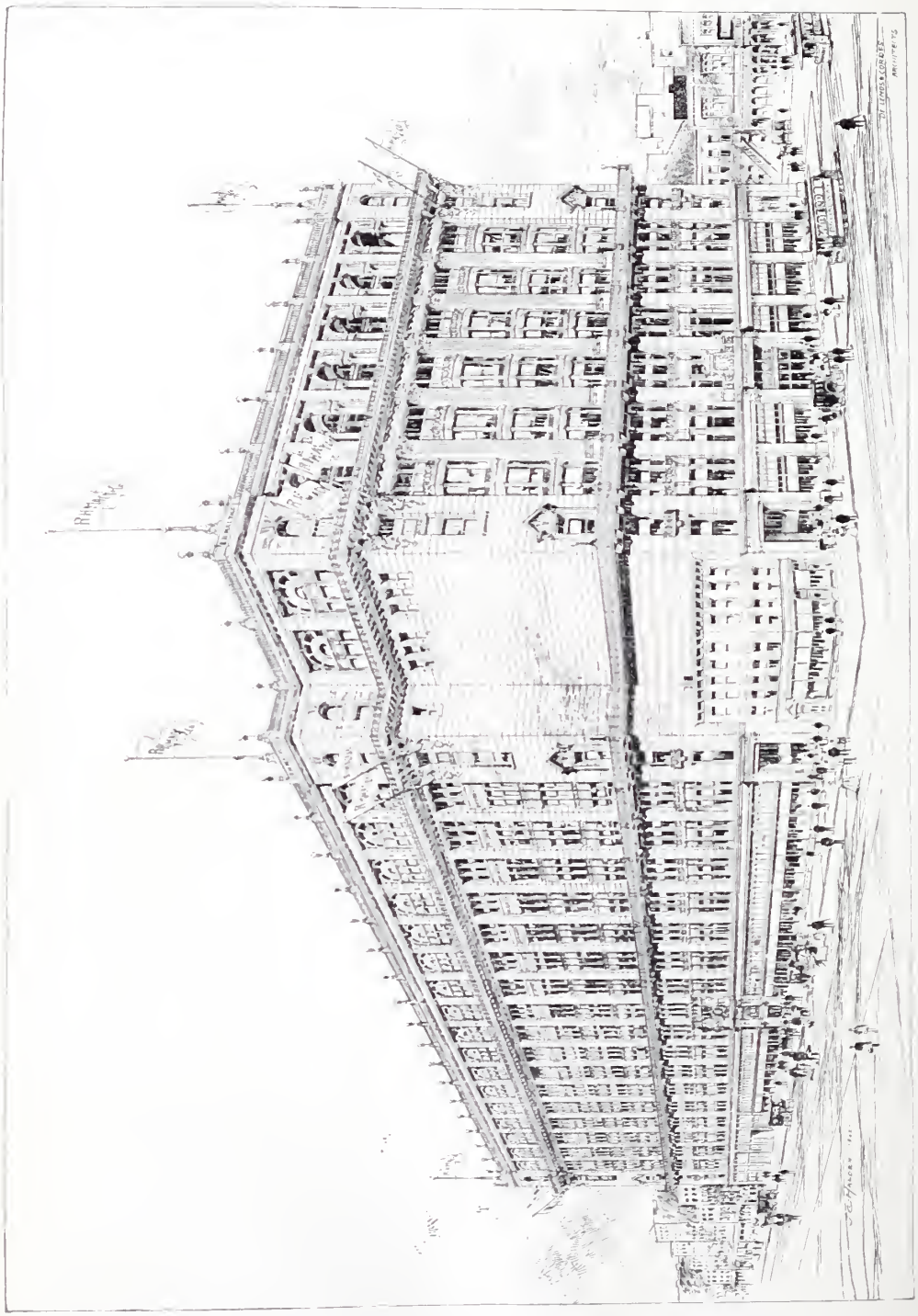


L'ART NOUVEAU CARD-TRAY, CLOCK AND CHAIR.

There was only one way in which these theories could be put into practice—namely, by having the articles made under my personal direction, and securing the assistance of such artists as seemed best disposed to carry out my ideas. The thousand ill-assorted things that I had collected together in a haphazard way gave place, little by little, to articles produced in my own workshops, according to the following program, to the exclusion of all other considerations. Thoroughly impregnate oneself anew with the old French tradition; try to pick up the thread of that tradition, with all its grace, elegance, sound logic and purity, and give it new developments, just as if the thread had not been broken for nearly a century; strive to realize what our distant predecessors would do if they were alive to-day—that is, enrich the old patrimony with a spirit of modernness, bearing in mind the eternal law which ordains that everything which fails to keep progressing is doomed to perish.

Far be it from me to imagine that nothing good can be produced except in the way which I conceive to be the right one. In the wide field now open each of us can sow his seed according to the fruits he wishes to gather. The only danger lies in the growth of rank weeds, impudently thrusting themselves to the front and choking the tender young plants just springing up. By "rank weeds" I mean all those crude imitations, shaped without regard to the most elementary rules of logic and given the name of "Art Nouveau;" all that parasitic vegetation which, as yet, prevents hesitating spirits from seeing that the time has come for us to shake off our foolish inertia, and that there is now no longer any reason why our decorative arts should not recover their full freedom of expansion and flourish as gloriously as they did in former times.

S. Bing.



THE NEW STORE OF R. H. MACY & CO.

Broadway, between 34th and 35th Streets, New York City.

De Lemos & Cordes, Architects.

ALL KINDS OF A STORE.

THE modern department stores are the results, for the most part, not of combination, but of accretion. There is one combination of stores that is doing business both in New York and elsewhere, but it is exceptional. The other big stores have originated in a small way, and have grown to their present huge dimensions; because they have found, little by little, that, other things being equal, it was cheaper to do business on a big scale than on a small scale. But just because these department stores have grown from the gradual extension, and in the end almost the multiplication of a business, which in the beginning occupied one or two small shops, it was not for many years that their owners erected buldings specially designed to meet the needs and exigencies of their complicated trade. As the demand for more accommodations became pressing, the proprietor of the store would add one neighboring shop after another until he came into possession of the whole block front. Later he would frequently be obliged to lease or purchase additional room across the street, and in this way obtain the larger floor space which his business imperatively demanded. The only two of the large stores doing business in New York which are now in this condition, is that of R. H. Macy & Co. and John Wanamaker. The old store of the former firm, consisting as it does of a scattered collection of heterogeneous buildings—some situated in 13th, some on 14th and some on 15th streets, some twelve and some four stories high —is an excellent example of a department store which has grown without the possibility of any systematic planning. John Wanamaker, also, finds the whole block occupied by the old Stewart store too small for his present business, which has crossed 9th street and occupied the block front on the south side of that street. A few years ago two of the largest Sixth avenue stores, viz., that of Adams & Co. and Simpson, Crawford & Simpson, were in a similar condition, and occupied buildings which had been designed for a number of small businesses, rather than one large one. All kinds of a store were situated in all kinds of a building.

But these casual methods of accommodating a business so complicated and demanding such perfect organization as that of a department store, were manifestly bound to be superseded. Moreover, from the start there were firms who controlled sufficient capital immediately to provide buildings adequate to their needs. The most remarkable instance of this fact in the history of the retail trade of New York was, of course, A. T. Stewart. He began

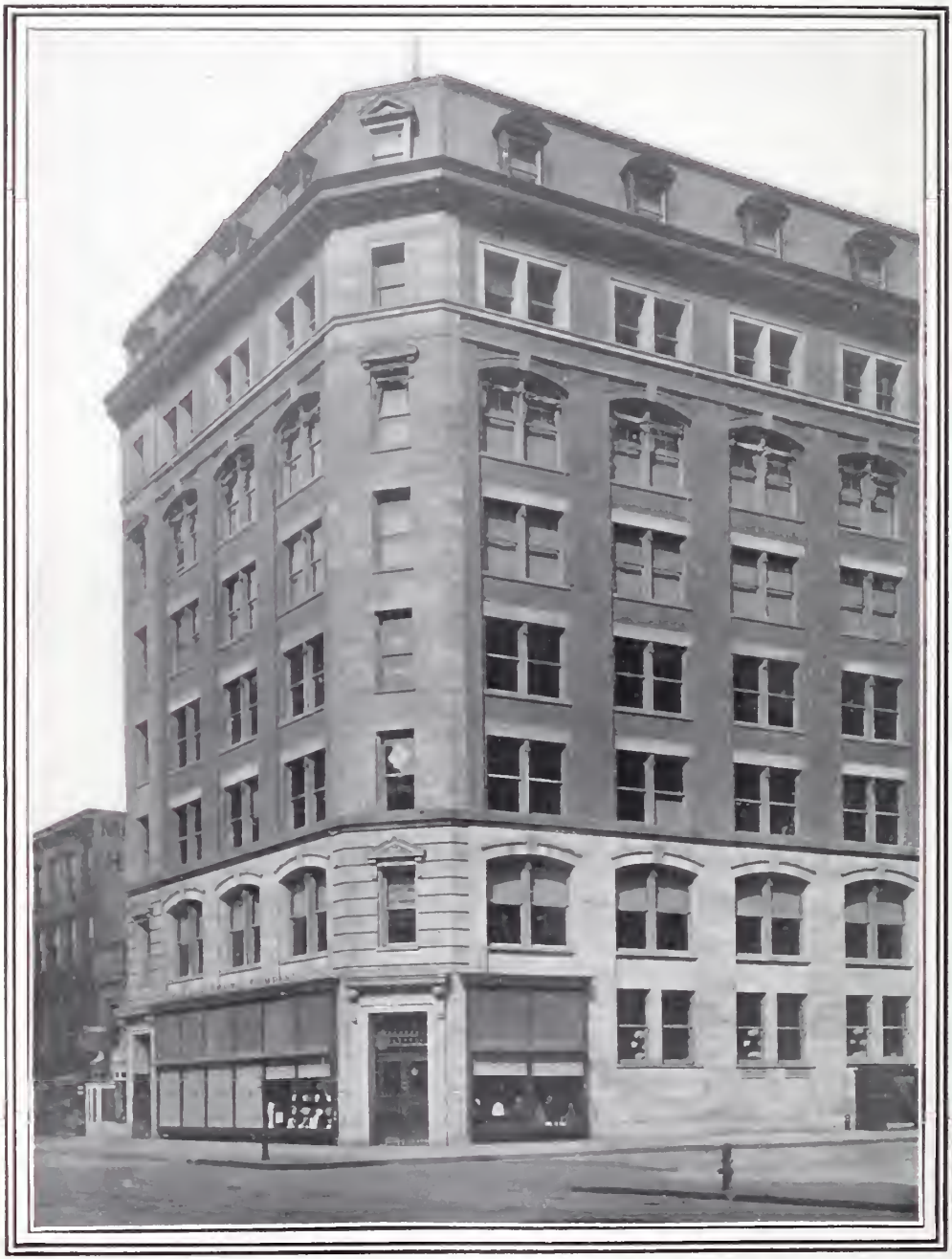
business indeed in a shop 22 x 30 at No. 283 Broadway, and for many years he shifted from place to place, renting ever larger accommodations in much the same neighborhood. But Mr. Stewart soon controlled sufficient cash to buy any accommodation his business demanded, and in 1848 he astonished New York by building the marble building at Broadway and Chambers street, at present known as the Stewart Building. This was the first example in this country of the dedication of so large a building to retail trade, and the newspapers at the period did not fail to be properly impressed. But Mr. Stewart's marble palace only sufficed for his needs some fourteen years. In 1862 he moved into the store occupying the whole block, bounded by Broadway, Ninth street, Fourth avenue and Tenth street, and this building was the first example, either in the United States or any other country, of the erection of something resembling a modern department store building. When Mr. Stewart died, in 1876, his building was still, so the New York papers stated, the largest of its kind in the world. It was proudly proclaimed to cover eight floors of 2½ acres each, to require engines developing 520 horse-power to keep its machinery going, to accommodate 2,000 employees and to have done a business (although this was an exaggeration) of some $50,000,000 in one year.

At that time, however, none of Mr. Stewart's competitors followed his example, probably because they could not afford to. His resources were immeasurably greater than those of any other storekeeper in New York, and after his death his business was not conducted in a fashion that made competing stores fear the unequal advantages, which his business enjoyed in having a building specially designed for the purpose. It was the appearance, in 1896, of a firm, Messrs. Siegel, Cooper & Co., hailing from Chicago, which stirred up the department storekeepers of New York to make their buildings as convenient as possible for a class of trade so intricate and so enormous. Before that date, indeed, many important New York stores, such as Altman's, McCreery on 23d street, and Stern's, had provided themselves with improved accommodations. But none of these buildings, while large and interesting examples of store construction, occupied a continuous frontage on three streets, and they were none of them in quite the same class as the building of Siegel, Cooper & Co., which not only covered a block front on Sixth avenue, between 18th and 19th streets, but also included 460 feet on 18th street and 460 feet on 19th street. The example of Messrs. Siegel, Cooper & Co. finally forced other important Sixth avenue firms to follow suit. In recent years Messrs. Adams & Co. and Simpson, Crawford & Simpson have built handsome structures, occupying block front-

THE NEW CLOTHING STORE OF SAKS & CO.
Greeley Square, Bet. 33d and 34th Sts. Buchman & Fox, Architects.

ages and containing all the improvements and conveniences demanded by the peculiar needs of a department store which mechanical ingenuity can suggest. More recently still, Messrs. R. H. Macy & Co. decided to move from the location at 14th street and Sixth avenue, which the firm have so long and so successfully occupied, and build a new and magnificent habitation on Greeley square, between 34th and 35th streets. The plans of this store is the outcome of all the knowledge and experience gained in the planning of the building previously erected, and in describing the kind of building which such a business as that of a modern department store requires, one is obliged inevitably to use this building more than any other as a type.

The indispensable requirements of a department store are many and various. The primary need is, of course, for a floor space



THE BROADWAY FRONTAGE OF THE NEW STORE AND LOFT BUILDING, AT BROADWAY AND 13TH STREET, NEW YORK CITY.

Clinton & Russell, Architects.

THE FOURTH AVENUE CORNER OF THE NEW STORE AND LOFT BUILDING AT 13TH ST., FROM BROADWAY TO 4TH AVE., NEW YORK CITY.

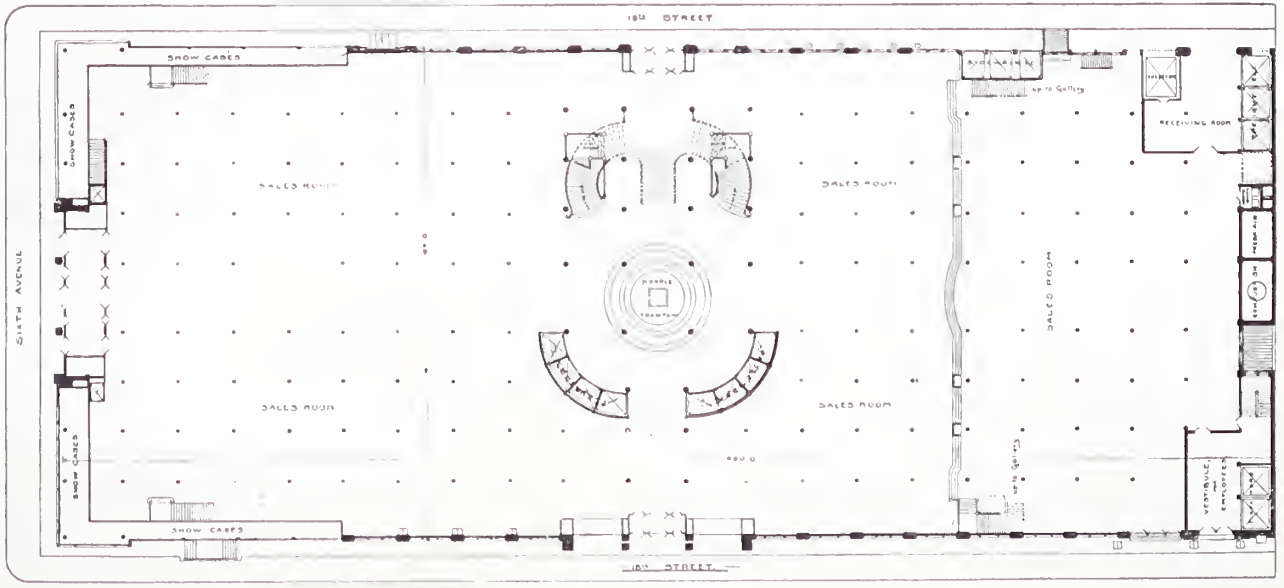
Clinton & Russell, Architects.

larger than that demanded by any other business, and this floor space cannot be divided among more than a certain number of floors. The new Macy building, for instance, has nine floors above ground and two floors below, each floor containing about 70,000 square feet. It would have been impossible for the firm to obtain the same actual floor area by doubling the number of stories and halving the area of the building, because of two reasons. In the first place it would be much too expensive, both in space and in power to supply the elevator service needed to carry the large number of customers, amounting to from 25,000 to 40,000 a day, to and from the many different floors they might desire to reach. In the second place if these customers were forced to do overmuch vertical traveling in order to make their purchases in the different departments, they would find it inconvenient; and such a disposition of space would tend, in all probability, to make them curtail their purchases. The consequence is that a department store is limited in height. Unlike an office building it cannot be profitably built higher than a comparatively low number of stories, and it is probable that the nine stories of the new Macy building represents, under present circumstances, the limit of useful and profitable height. The primary requirement of a department store building may consequently be defined as the largest possible floor space confined to the fewest possible stories.

But to this primary requirement of a large area for the display of goods and the accommodation of the various departments, must be added a thousand secondary requirements, which diminish the floor space actually used for the sale of goods by a very large percentage. Space must also be provided for the receiving, handling, and the storage and shipping of these goods, for the circulation and entertainment of the customers who come to buy them, for the disposal of the refuse and dirt which such a mass of business is constantly throwing off, for the wrapping up of packages and the return of the change, for the accommodation of the large numbers of employees who are constantly at work in such an establishment, for the location of the machinery and engines which all these services need, and last, but not least, for the sufficient protection of the great quantities of perishable material against destruction by fire. These different secondary requirements, not only frequently conflict with one another, but they all of them tend to diminish the space actually occupied by the counters for the display and the sale of the goods; and the disposition of the available space, so that the great and complicated machine will work smoothly without making any excessive deductions from the space occupied by the counters, is a matter of the nicest and most elaborate adjustment.

To take first the point mentioned last, viz., the important question of fire protection, the problem has been recently stated in its broadest aspect, as follows, by Messrs. De Lemos & Cordes, the architects of the new Macy store, the Siegel-Cooper and the Adams buildings: "In the planning of a department store the problem of fireproof construction and of fire protection are much more difficult and comprehensive than they are in other mercantile buildings. Not only is the area exposed to an attack of fire of a much larger extent, and, therefore, the spread of the fire much more difficult to check, but ample means must be provided to afford safe and immediate egress, in such an emergency, both for the public and for the several thousand employees in the building. The consequences are that the necessary requirements of space, light, attractiveness and facilities of communication, as expected by the owners; the devices to prevent as effectually as possible the beginning of a fire, and to check its spread when started; the rating of the different modes of construction and protection accorded by the New York fire insurance exchange schedule; and finally, the means that *must* be provided to secure the safe exit of so many thousands of people in the shortest possible time; all these necessary requirements cannot help but clash, and will call for many compromises to adjust properly one to another these various and often conflicting demands."

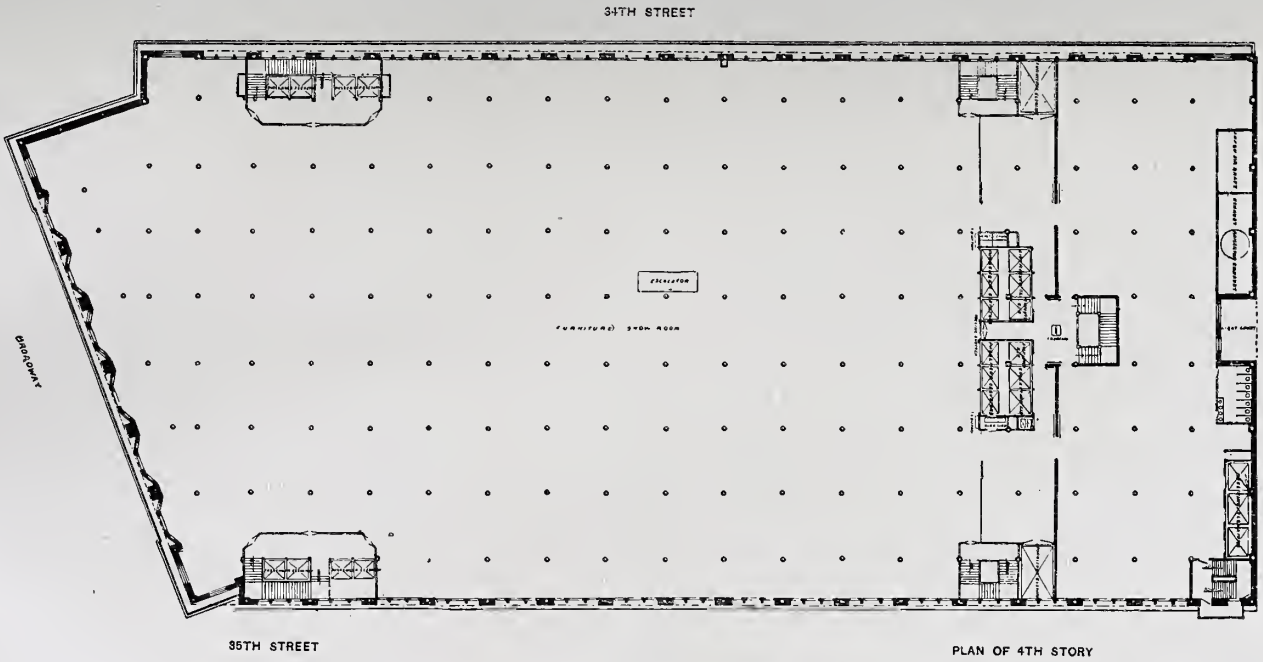
Each of the different points mentioned in this summary deserve some elaboration. Take, for instance, the very important one of a sufficient means of exit in case of fire alarm. For this and for every other reason it pays the proprietor of a department store to provide an abundance of aisle space on the different floors used by his customers, as well as a liberal supply of stairways, elevators and escalators. In the Siegel-Cooper store there are eight passenger elevators situated very near the centre of the building, and at one end two for employees and four for freight, as well as a moving sidewalk from the first floor to the second. The new Macy store, with a somewhat smaller superficial area, will have an escalator connecting all the floors not used merely for storage purposes, eight passenger elevators near the Broadway end, eight at the other end—six for customers and two for employees—two elevators for furniture and three for general freight, and in addition, several other service shafts. In order to be both useful and unobjectionable, all these passages are, and must be, of generous width and capacity. They must, most of them, be very conspicuous, and at the same time they must not obstruct the aisles and passages between the counters, nor exclude the daylight. But what is most important of all from the insurance point of view, all these shafts are dangerous as fire distributors, and that their



THE FIRST STORY PLAN

THE FIRST FLOOR PLAN OF SIEGEL-COOPER CO.'S STORE.

Sixth Ave., 18th to 19th Sts., New York City. De Lemos & Cordes, Architects.



FOURTH FLOOR PLAN OF R. H. MACY & CO.'S NEW STORE.

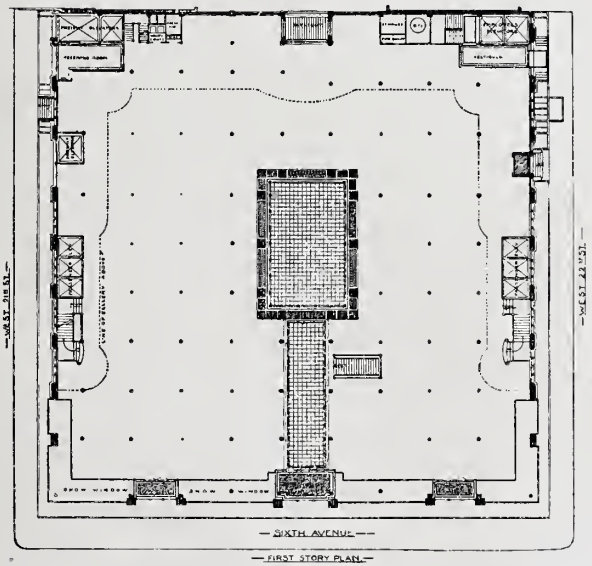
Broadway, 34th to 35th Sts., New York City. De Lemos & Cordes, Architects.

numbers must be kept as low as convenience and the building laws permit, while they must be constructed in the most carefully fireproof manner. Hence, as Messrs. De Lemos & Cordes say in the article above quoted: It is desirable "to combine stairways and elevators at their various locations and to surround them and a hallway in front entirely with iron frame work, plaster and wire plate glass partitions. The plate glass will not obstruct the view, and the plaster surfaces of the partition near the ceiling will serve as a fire screen. Ornamentation can be applied so as to make the surfaces look pleasant and cheerful. Facings of marble or metal may be substituted for the plastered surfaces. The doors leading into the hallways should be fireproof and close automatically. Rolling shutters, to be used at night, should also be provided." In addition to precautions such as those suggested above, the Macy store has a fireproof partition separating the back of the building from the front. The object of this partition is to divide the rear of the store, used as it is for the receiving and shipping of goods, the housing of the employees and for the heating and ventilating stacks—to divide this part of the store from the counters, thereby effectually reducing the area throughout which the fire may spread, and at the same time providing a fire-escape in case the conflagration originated in another part of the building. Yet such a partition, useful as it would be in the case of a fire, is at other times a bar to freedom of movement throughout the building.

In another respect, also, the necessity of taking the most elaborate precautions against fire, so as to reduce the cost of insurance, has an important effect upon the design of a department store. Probably there are no other buildings in New York as large as the Siegel-Cooper or the Macy building, that are entirely without interior courts for purposes of light and ventilation. Some of the other large department stores do, indeed, have such courts, although for purposes of light alone, they are by no means necessary. The combination of abundant window space on the exterior, with the use of arc lights in the interior, provides all the light actually needed. Yet, even though not strictly necessary these light courts, extending through two or more stories, roofed with glass and surrounded by balconies, make such an attractive feature of a department store, that they would probably be universally used were it not that here again, and especially in store buildings of considerable height, the risk of distribution of fire in the building, owing to the introduction of the light court, would be so materially increased, that from a practical standpoint it is usually dispensed with.

In addition to the precautions which are taken against the spread

of fire, such as those outlined above, other precautions equally expensive and equally embarrassing to the architect, are used to extinguish a fire when started. The automatic sprinkler systems, for instance, necessary as they are for checking the spread of fire and reducing the insurance rates, give him a great deal of trouble. The placing of the enormous tanks, machinery and piping required to distribute the water properly is, in itself, an exceedingly difficult problem, while the numerous lines of suspended pipes and conductors naturally interfere, more or less, with any attempt at ceiling decoration. Besides the automatic sprinkler systems other precautions are taken to diminish that injury from water, which



FIRST FLOOR PLAN OF STORE OF ADAMS & CO.
Sixth Ave., 21st to 22d Sts., New York City. De Lemos & Cordes, Architects.

in case of a conflagration generally amounts to a larger total than does the injury from the fire itself. Thus, as soon as a fire sets the automatic sprinkler system in partial operation, great quantities of water are discharged on the floors, causing the utmost damage to the plastered ceilings, the merchandise and the floors themselves. Hence it is desirable not only to make the floors waterproof as well as fireproof, but to grade them and to gutter them with inside and outside leader connections.

So much for the all-important matter of fire protection, which, generally unsuspected by the public, has more to do with the planning of one of the big department stores than any other single group of considerations. Nevertheless this is only one of the many

THE DEPARTMENT STORE OF ADAMS & CO.

Sixth Ave., between 21st and 22d Sts., New York City.

De Lemos & Cordes, Architects.

DEPARTMENT STORE OF ADAMS & CO.
(Showing 21st St. Corner.)
Sixth Ave., between 21st and 22d Sts., New York City. De Lemos & Cordes, Architects.

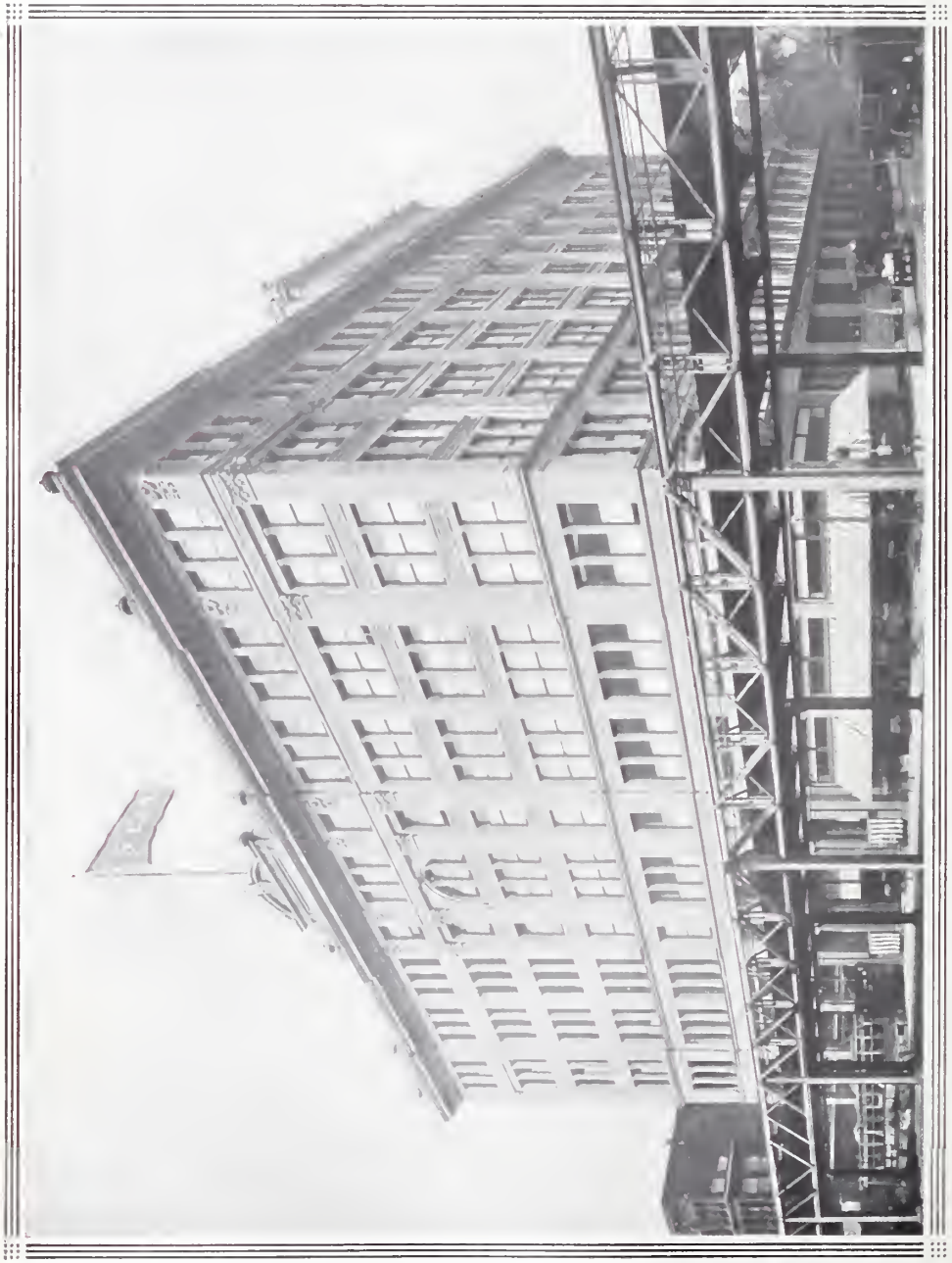
complicated problems that has to be dealt with by the architect of such a building. A large amount of space, for instance, conveniently situated, has to be provided for the accommodation of lady customers—for waiting rooms, closets, manicure parlors, and even dental chairs. Moreover, the restaurant branch of a department store is becoming more and more "featured" by their managers, and consequently is consuming ever increasing quantities of space. The new Macy building in this, as in other respects, is the high-water mark of department store planning. It will provide sufficient room to accommodate at any one time no less than 2,500 tired shoppers, and as this space will be finally located on the ninth floor of the new building, it will enjoy every advantage of light, air and outlook. The kitchens, to do the cooking for these 2,500 people will, of course, be situated on the same floor, and as a whole it will constitute one of the most elaborate and best equipped, if not one of the most expensive restaurants in the city.

Next to the customers, the employees come in for the largest share of consideration. These employees have to be provided with lunch and recreation rooms, elevators, lockers, closets and a sort of a hospital, to which they can retire in case of sudden indisposition. It would seem as if the space which could be best spared for accommodations of this kind would be on the top floor, but the use of the top floor for such purposes is attended with obstacles which are almost insurmountable. It must be remembered that these employees, amounting at Christmas time to some 4,000 people, all arrive and depart at the same time. Now, if there were four elevators, each accommodating forty people, it would take twenty-five trips for each elevator, or one hour and forty minutes, all told, to move 4,000 people each way. And each person would have to be moved four times a day. The consequence is that it is practically impossible to provide the necessary space in any single part of the building, which is at all difficult of access; and in the Macy store lockers and closets, approached by stairways nine feet wide are provided on each floor for the employees there at work, an expenditure of space which is considerable, but necessary. Moreover, the rooms provided for the use of the boys and men are separated from that provided for the use of women.

Finally, the business of receiving, storing and distributing the goods is a similarly difficult and complicated matter, which can best be treated by considering it in relation to the general distribution and employment of space in the building. A large part of the basement is inevitably given over to the engines and machinery which operates the mechanical services required in such a building, including the electric motors, the pumps, the refrigerating plant, the engines required for the pneumatic tube service, the

heating plant and the like. The 540 horse-power, which the newspapers of 1876 considered so extraordinary in the case of the Stewart Building, appears to be very small beside the 1,500 horse-power developed by the engines in the Siegel-Cooper Building, or the 3,000 horse-power which will be developed by those in the new Macy building. The rest of the basement is used as a salesroom, always for house furnishing goods and for a general receiving room. This general receiving room is the place in which all goods are placed when they first come and before they are sent upstairs to be stored away before using. It is connected by freight elevators with the floors used for storage purposes, which include all the floors above the fourth or fifth story. These floors are not distinguished from one another in any way. Not being used for the sale of goods they are not approached by the passenger elevators, except those which are used by certain employees, and for the same reason they are frequently left entirely unfinished. They are all constructed to carry the same amount of weight, except in the case of the floor or floors which is used by the grocery department. The canned goods and the like sold by this department are the heaviest class of stock carried by a department store, and require specially strengthened floors.

The ideal arrangement, both for the receiving and shipping of goods, is the building of a large passageway into which the wagons can drive and from which the goods can be both discharged and collected. The shipment of the goods which have been purchased by customers is, however, a more complicated job than their receipt, and the arrangements made for the purpose are correspondingly elaborate. All the big shops use some system of bins labeled with the names of towns in Jersey, or with larger and smaller divisions of the Greater New York, to which the goods must be delivered, and after the packages are wrapped up or crated they are first sent to their appropriate division. In stores that have no passageway into which the wagons can drive, the bins are generally situated in the basement and carried to the wagons over the public sidewalk. But this arrangement, while sometimes necessary, has obvious inconveniences, and for the new Macy store a system has been worked out which will be very much superior to any hitherto in use, and which will greatly facilitate the distribution of the goods. In this case the bins will be situated on a private sidewalk, from which they can be most conveniently and expeditiously transferred to the wagons. Moreover, these bins are reached by means of mechanical belt and chain conveyors, so that throughout the whole process the amount of actual labor employed in the process of distribution has been reduced to the lowest possible terms.



THE DEPARTMENT STORE OF THE SIMPSON-CRAWFORD CO.
Sixth Ave., between 19th and 20th Sts., New York City. William H. Hume & Son, Architects.

Another matter accessory to the distribution of the goods, but almost as important as that process is, is the disposition of the refuse, of the accumulation of wooden and paper boxes, of old paper and packing material, and of the thousand-and-one odds and ends which the business of a large store throws off into a scrap heap. This refuse is so enormous and so useful that it provides a large part of the fuel used to run one of the most important boilers. In the new Macy store it will be carried away by means of a waste chute, built of brick and measuring 4 x 4, which will run from the top floor to the basement. Since this chute provided an easy means to distribute fire, as well as to get rid of refuse, it has been constructed with a particular view to this danger. On every floor is a trap door which opens down but not in the other direction, and which automatically closes as soon as a certain amount of pressure is removed. Another usually slow and laborious job, when accomplished by hand, will be much facilitated in the new Macy building by the use of machinery. A sweeping apparatus will be installed which, by the use of a vacuum, will suck the dirt from the floor in a small fraction of the time employed for the purpose by the respectable but not expeditious scrubwoman and sweeper.

Such is a brief account of a few of the essential requirements which an architect must consider when designing a department store, and the most casual reader will appreciate that it is a task which calls for the utmost ingenuity and fertility of invention. In fact, the big department store almost ranks with the modern ocean steamer or the modern hotel as a triumph of complicated and ingenious planning. It does not have to provide for the separate and peculiar needs of so many individual people as does a hotel or an ocean steamer, but it has to handle much larger masses of material and accommodate larger numbers of people—bent though they be upon much the same errand. At present the maximum number of employees is 4,000, and the maximum number of daily customers is something over 40,000. But what will these figures aggregate when at the end of thirty years there will be 7,000,000 residents of Greater New York, instead of only 3,500,000? If it takes a floor space of about 75,000 square feet to accommodate the shoppers of the present day, how much will it take to accommodate twice that number? And how will the proprietors of the department stores of 1930 secure such an increase of space? These are questions which cannot be answered, but they draw attention to the fact that the department store is still a very modern architectural type, and that the designers of these buildings of the future will be confronted by even more elaborate and difficult problems than those of the present day.

THE FRONT VIEW OF THE NEW METROPOLITAN MUSEUM OF ART.

Fifth Avenue, New York City.

The late R. M. Hunt, Architect.

ARCHITECTURAL APPRECIATIONS.—NO. 1.

The New Metropolitan Museum of Art.

THE architectural history of the Metropolitan Museum has been full of vicissitudes, of which the existing buildings bear the scars. The first building erected in Central Park for the use of the Museum, while it was still in hired quarters down in 14th street, was, as most of us now recognize, mistakenly placed. The Park was taken for the site as in the line of least resistance, in which, thanks to the campaign of education that has been going on ever since, it would now no longer be. The notion of creating new real estate values by establishing an important and ornamental public building where it will be the centre of a new quarter, instead of following the fashion and putting it on ground already held at fancy prices, is a branch of municipal economy not much more understood now in New York than it was a quarter of a century ago. One must go to Paris to see it practised in perfection.

The original museum, the nucleus of the present pile, was not much more fortunate in design than it was in situation, or than was the original building of the Museum of Natural History, built at about the same time and by the same architects, Messrs. Vaux and Mould. We are under great municipal obligations to the latter of these architects in particular for the incidental architecture of Central Park, very clever as it is in itself and almost perfect in appropriateness to its surroundings. But neither of these buildings was among its architect's successes. The design of each seems to have been complicated, and embarrassed, by the very fact which makes so much of the attractiveness of the lesser structures, the fact of being designed with reference and conformity to their situation in a public park. The obvious truth that structures of this character do not "belong" foredooms such an attempt to failure. But besides there is very little in either museum of Wrey Mould's felicity. The Museum of Art was a rather gaunt and rather monotonous piece of Victorian Gothic, a rough gray granite basement, with a superstructure of a single tall story in red brick, pierced at equal intervals with tall pointed openings of which the enclosing arch was "Florentine" in the sense that it was deeper at the apex than at the springing, though both extrados and intrados were pointed. These arches also were of gray granite, enclosing pediments of alternate stripes of red brick and white stone. The steep roof did what a roof could to save the structure under it. The interior, especially the great hall, which is still the chief feature of the actual interior, was much more interesting than the outside. The arched roof trusses exemplified impressively what then could be done in the way of an architectural

treatment of metal, although they look somewhat heavy and clumsy in the light of the possibilities of artistic engineering in steel as it has since been developed. But the exterior by no means "imposed itself" upon subsequent architects. The next of these, the late Mr. Tuckerman, hid much of the original building, to which, however, he conformed in material and in the main lines of his extension. Perhaps even that degree of conformity was a mistake, considering the change of style which changing fashion had imposed upon him, for his fronts, with their square-headed openings in place of the tall arcade, have the unhappy air of being bisected at the top of the basement. Neither is his classic detail more fortunate than the original Gothic. The shafts and lintels of the wall are quite unpretentious, but so much cannot be said of the excessive scale of the red terra cotta cresting, nor of its rather raw color, nor of the unsuccessful expedient of painting the brickwork. The triple southern entrance is not successful, and it is pretentious; and the architect may be said to have fallen between the two stools of modesty and "monumentality," of conformity and nonconformity. What he left of the original nucleus of the exterior architecture, his successor, whose work is immediately under consideration, has mostly hidden behind the connecting passage from the old building to the new, so that all that is left visible of the original exterior of Vaux and Mould is one of the arches of their arcade on each side of this connecting building.

The late Richard M. Hunt, the designer of the new wing which has been carried out by his son and successor, had a different problem from either of his predecessors. Evidently, in the first place, he had much more money to spend. As evidently, in the second, he was dispensed, by the fact that his building was to front Fifth avenue, from trying to make appropriate in its architecture to a park a building which plainly had nothing to do with the park, and so from attempting the solution of an insoluble problem. He took his architectural problem as what it had really come to be, the erection in a wide and frequented avenue of a monumental and imposing front which had nothing to do with rural scenery. His success, as we can all now see, has been really brilliant. The Fifth avenue front of the Museum of Art is not only its architect's most pronounced success in that kind, keeping all, and more than all the good qualities of the Lenox Library, while avoiding the monotony into which the massiveness and repose of that building do undoubtedly tend to degenerate. It comes very near to justifying the praise bestowed upon it by an architect whose own work is of a very different inspiration, as "the best classic building in this country."

The situation counts, no doubt, for much. The opportunity to stop the vista of a street with a monumental building, and to frame

its central feature with the riparian building of that street is very rare under our rectangular and unvaried street system. It gives the architect such a chance as is common in Washington, and has there been taken excellent advantage of by the architect of the Patent Office in planting his Doric portico squarely across the way. But we do not recall another such in New York, certainly not another in which the chance has been turned to so brilliant account. Upon the great scale upon which the front of the Metropolitan Museum has been laid out, its central feature, the arch with its flanking pairs of free standing columns, exactly fills and occupies the vista of 82d street. Even if the design and detail of the feature were much less successful than they are, a feature so set and framed would be effective. Evidently, his unusual opportunity was in the architect's mind, as it must be in the minds of all instructed spectators of his work, and as the results of it must be impressive to spectators who are not in the habit of analyzing their aesthetic impressions. In the setting of this front, quite as much as in the design of it, there is a distinct reminiscence of Paris. Nobody can see Paris without seeing that as much attention is given to placing monumental buildings as to designing them, nor New York without seeing that no attention at all is given to placing such monumental buildings as it has. "They order these matters better in France," and when we wake up to the desirableness of making a city we shall order them better in New York.

In addition to its situation, and its adaptation to that situation, the success of the front in scale is perhaps the chief element in its architectural success. One would scarcely suppose, either from the photograph or from the building, that the front is nearly three hundred feet in extent. There is nothing nearer than the dwellings opposite by which to scale it, for the hinder parts of the Museum itself do not come into general view of this front. Nobody would give it its actual magnitude unless he had corrected his impression by mensuration. Nevertheless, it gets the benefit of its dimensions, not by a direct appreciation of them, but by the sense of largeness and simplicity which the design in the first place imparts, but which the scale most powerfully promotes. The confinement of the order to the central front, and the framing of it between plain wings, only as high as the order itself, are other excellent points of design. The "monument" thus gets the full effect to which it is entitled.

It is a modern, specifically it is a French version of Greco-Roman in which the front is composed. And it presents one, and a very eligible, solution of the problem presented by the mixed Roman construction, the use of the post and lintel, the column and entablature, and the arch as structural devices in the same façade. The most usual trouble in this conjunction arises when the two con-

THE NEW METROPOLITAN MUSEUM OF ART AS IT APPEARS LOOKING UP FIFTH AVENUE.

The late R. M. Hunt, Architect.

structions, both apparently engaged in the same work of holding up the superstructure, are too nearly equal, so that one cannot make out at a glance whether the main structural system is of orders or of arches. One must be, one is inclined to say, distinctly subordinate to the other. Very good results have been obtained where the arches have been subdued to the purpose of covering openings in a wall which itself appeared as a mere screen in a structure essentially columnar, and others, equally good, where the order, subdued in scale, has been employed as the decoration of a structure essentially arched. Perhaps the best result of all has accrued when the contradiction has been entirely obviated by the omission of the arches, and the order has appeared as the sole structure, the openings of the screen wall in the intercolumniations being also rectangular. This is the system in that admirable work, the building of the Faculty of Medicine in Paris. But this is no longer Greco-Roman, but purely Hellenic. None of these is the method used in the Metropolitan Museum. Certainly one cannot say either of these huge orders or of these huge arches, that either is subordinate to the other. They are of equal structural importance. How, then, is the contradiction avoided, as it clearly and successfully is? Simply by erecting a frankly arched wall, and then by decorating it with a pair of columns flanking each arch, but projected from the wall, having evidently nothing at all to do with it structurally, and existing as "their own excuse for being," although a reason of being is also supplied for them in the groups of sculpture they are to carry. From plinth to cornice they are entirely independent of the structure. "Constructed decoration" they certainly and avowedly are, but in no degree do they complicate or compromise a structure which is clearly complete without them. It is by adverting to this consideration that we are enabled to appreciate how forcible and valuable is the detachment of the columns, and the fact that their "load" is only the sculpture they sustain. Suppose, for instance, that the entablature of the order had been continuous along the front, the rest of the composition remaining as it is. How would the great arches have lost at once their significance and their impressiveness, as sustaining a crowning member abundantly sustained already? The "battle of the styles" which every Greco-Roman front presents, instead of being composed by a truce, as here, which assigns its own "sphere of influence" to each of the contending parties, would visibly have raged along the front, to its grievous detriment.

It is, of course, in the treatment of the arches and not of the order, that the modern and Parisian quality appears of which we have made mention. The order itself is after the strictest Roman precedents, and is especially well chosen for its purpose. Of the three

orders which they borrowed from the Greeks, the Romans degraded two, but the third, the Corinthian, they undoubtedly improved and made more effective by their enrichments. There is no Grecian example of this order that would not look poor and ineffectual on the scale and for the purpose for which the order is here employed. Being a pure enrichment, the order is, very properly, much more ornate than the arches, in which the customary failure of the Beaux Arts to make an effective elaboration of mouldings would be more conspicuous but for the subordination of the whole feature. The arches are in fact evident modernities between evident antiquities, while the simplicity and severity of the wings are unmistakably classic, unmistakably Greek. Not, however, that there is any discord or any solecism in the conjunction, for, in spite of the diversities, the front has a clear and effective unity.

In the details it is plain that the designer has kept his scale in constant view, and carried it through, in the parts in which his module failed him as well as in those in which it was available, in each of which the propriety and keeping are equally noticeable, or rather are not noticeable until one looks critically, but simply give an agreeable sense of "belonging." In the cresting, for example, where it was a happy thought to introduce masks, which fulfil the architectural functions of palmettes or other conventional ornaments, and which are better worth looking at on their own account; and equally a happy thought to set diagonally those at the angle of the return projections, which recognize the pyramidal groups of sculpture that are to crown the order.

Of the sculpture already in place it is to be said that it fulfils its architectural purpose well enough, and neither attracts nor repays much attention on its own account. It consists of the caryatids on the attics of the wings, and of the medallions in the spandrils of the great arches, and of the keystones of these. This faint praise will plainly not suffice for the groups to be seen against the great attic of the centre, which will offer opportunities of the first importance for independent sculpture and will really test the ability of the artists to whom they may be assigned.

One has to say of the "storm door" which is already in place that it is entirely unworthy of the architecture to which it is attached, and which it does what it can to vulgarize. Either it should be a provisional, temporary and unpretentious shelter, justified by its practical necessity, or else it should be an integral feature of the composition, a porch as monumental as the rest. The designer of it has made it neither one thing nor the other, but has fallen between the two stools in constructing a pretentious and cheap porch in sheet metal, mimicking monumental architecture and bringing it into contempt.

The Museum and the Rogers Bequest.

NOW that the Metropolitan Museum has come into a fortune, it becomes interesting to consider what it should do with its income and how it should go to work to make itself the great institution that we all hope it may become. As its catalogue reminds the public, the Metropolitan Museum is a "private corporation," and its director and trustees sometimes show restiveness at criticism or suggestion. Yet, a private corporation which occupies a building erected by the State, on land owned by the city, can hardly claim that it has no public responsibilities, and that what it does, or leaves undone, is wholly its private business. It receives certain aid, enjoys certain privileges and immunities, because it undertakes to do certain things which, in European countries, are done by the State for the benefit of all the citizens; and the way in which it does these things is none the less a legitimate matter for criticism or for censure, because the body of citizens has no direct means of action upon the institution. Rather because the people, for whom they are working, can only criticise or advise, should all honest and temperate criticism be frankly welcomed. No one means to attack the Museum, or to "defile the temple of art," as one of its officers recently put it. No one has anything but gratitude for much that that institution has done for us; anything but hope for its greater usefulness in the future. It is in no carping spirit, and in the hope that we shall not be considered impertinent, that we offer the following suggestions.

We shall not at this time attempt to deal in any way with the Museum's collections of sculpture and of architectural and archæological objects, but shall confine our attention to the collection of paintings, and shall consider what are the directions in which special effort is needed to make the Metropolitan a great museum of painting. It is obvious that the first necessity is to determine what the Museum now possesses; and here we are met with a difficulty at the outset. The collection is practically without classification, and the catalogue is full of doubtful, or more than doubtful attributions. The terms of several important gifts have rendered the lack of classification inevitable, it being necessary, for instance, that the Wolfe bequest shall be "kept together and catalogued as one collection, or be forfeited to the legal heirs of the donor." Courtesy and the disinclination to look gift horses in the mouth have discouraged particularity as to authenticity. Beside all this, pictures which are only loaned to the Museum are mingled with those which it owns, and it is necessary to keep a sharp eye upon the catalogue in order to distinguish between them.

For purposes of stock taking, then, if for no others, it would be well that the Museum should begin by reforming its catalogue. But there are other reasons of importance why the attributions of the present catalogue should be revised. If a work of art be good in itself it is not always of importance that it should be known by whom it was produced, but it *is* important that it should not masquerade under the name of an artist who did not produce it, while if the work be bad or indifferent a false attribution may do great harm with the unsuspicious. The docile student tries hard to convince himself that the bad picture is good; his standards of judgment become hopelessly confused, and he is encouraged in a kind of artistic hypocrisy which is wholesome neither for his art nor his morals. The student of more independent mind concludes that, as this work, apparently accepted as that of a famous master, is bad, so the great reputations of the past are artificial and without any basis in real artistic greatness, and is confirmed in a scornful narrowness of taste that is fatal to true culture. The better the apparent authority on which these false attributions are offered the more disastrous is the result, and the mistakes of a connoisseur, like the late Henry S. Marquand, are the more dangerous for the good judgment he often displayed.

The Museum and the public owe a great debt to that gentleman for the enlightened generosity which formed the Marquand Collection—a collection which contains a number of works of a very high order, and worthy of an honored place in any museum in the world. During his lifetime it was natural that gratitude and respect should have sealed the lips not only of the Museum authorities, but of competent critics. But there seems no longer any reason why it should not be confessed that he was not infallible, and that the Marquand Collection contains a number of works which must be classed as doubtful, and several which are certainly not what he thought them. Indeed, this has been admitted in the case of one picture, the "Portraits of Two Gentlemen," which is catalogued as "attributed to Franz Hals." It is doubtful if any of the so-called Velazquezs in this gallery can be rated as other than school-pieces, the "Masaccio" and the "Van Eycks" cannot be unreservedly accepted. The "Pyramus and Thisbe" is certainly not by Rubens, and the "Susannah and the Elders" is probably a school replica or an old copy of the well-known picture in Munich. There are one or two other pictures in this collection about which doubt may be felt, but the two which most imperatively demand recataloguing are the "Portrait of a Lady," now attributed to Da Vinci, and the "Portrait of Archbishop Cranmer," attributed to Holbein. Even if the quality of the former were vastly better than it is—and the workmanship is inferior to

that of any Luini we know—the fact that there are not more than half a dozen accepted Lionardos in the world should, of itself, be sufficient to justify a modest interrogation mark in the catalogue. When so lovely and so Lionardesque a picture as "La Belle Féroninère" is classed among doubtful works, what shall we think of the staring eyes and crooked, black mouth of the Metropolitan picture? As for the "Cranmer," it is almost inconceivable that so badly drawn and feeble a performance should ever have been attributed to one of the greatest draughtsmen of all time.

Of course, as is well known, all the great galleries of the world have been engaged, of recent years, in this sort of overhauling of catalogues and readjustment of attributions, and it is not surprising that it should be needed at the Metropolitan. The first important acquisition of the Museum was a collection of Dutch and Flemish pictures bought in 1871. It contains a few good pictures and many indifferent ones—genuine pictures by inferior men, or doubtful pictures attributed to great masters. The "Return of the Holy Family from Egypt," attributed to Rubens, seems to have a good pedigree, but, if genuine, is so badly cleaned and repainted, as to be practically worthless. The "Dutch Burgomaster" it is hard to accept as by Van der Helst, in face of the superb portrait of Jean Van Hale in the Marquand Collection. The most satisfactory picture of this purchase is the "Burgomaster of Leyden and his Wife," by Karel Van Moor, a sound and excellent piece of work by a second-rate master. Besides this and the Marquand Collection, and the Catherine Wolfe Colection of modern paintings, there are a number of pictures in the Museum, gathered at different times and in different ways, and not all of these are certainly what the catalogue states them to be. Certain pictures attributed to Reynolds are notably suspicious, particularly the "Mr. John Hawksworth," which bears no resemblance in manner of painting to any Reynolds we have ever seen.

As nearly as can be judged in the present arrangement, or lack of arrangement, of the Museum (which, unfortunately, seems inevitable and permanent), its actual possessions will be found to be, roughly, somewhat as follows:

Of the great Italian and Spanish schools: Very little at all considerable.

Of the Flemish school: One good Rubens, one first-rate Van Dyck and two or three good ones, and a number of minor pictures and doubtful pictures.

Of the Dutch school: Several Rembrandt's, one of them a great one; a fine Van der Helst, a fine Ruysdael, several good pictures by Hals, a beautiful little Vermeer, and a considerable number of other pictures of less importance.

Of the English school: Several Reynold's, mostly in a bad state of preservation, a couple of middling Gainsboroughs, two or three Turners and a few others of some interest. Of Haydon's amazing "Napoleon at St. Helena," one need say little.

Of the modern French school: A large and representative collection, which, however, includes only one Corot, and is entirely without a Millet or any adequate examples of the earlier men. to acquire if the opportunity offers—should be purchased for some

Of the American school: A rather haphazard and fortuitous collection containing some good examples.

This is a list of possessions to be proud of and grateful for, but its weak points are as obvious as its merits, and the policy necessary to be pursued for the strengthening and completion of it outlines itself clearly. For instance, the collections are so weak in Italian pictures that every opportunity should be seized to acquire good and authentic Italian pictures, particularly of the early and high Renaissance, whether or not they are the work of the greatest men or the greatest works of their author's. The works of the later Italian schools may be, relatively, neglected, not only because of their lesser importance, artistically and historically, but because the Museum already possesses some late Italian works —notably, two or three Tiepolos. On the other hand, the Museum contains quite as many second-rate Dutch and Flemish pictures as it needs for the present, and only works of real and indisputable importance in those schools—works which it would be a crime not to acquire if the opportunity offers—should be purchased for some years to come. Such a collection as that of J. L. Menke, now on exhibition at the Museum, though it doubtless contains many genuine works of minor painters, as well as some exceedingly doubtful ones attributed to great names, would, if added to the permanent collection, only increase its present disproportion. Any first-rate pictures by the great Spaniards would, of course, be welcomed, as would first-rate pictures of any school, but the Spanish school is not of the first importance, outside of one or two names. In the English school the great desideratum is some adequate representation of its greatest man, Gainsborough. If Mr. Hearn's beautiful "English Landscape" were owned by the Museum, instead of being merely loaned to it, it would almost render the acquisition of other Gainsborough landscapes unnecessary; but a really fine portrait or two by him are to be wished for. Turner is already fairly represented, but Reynolds and Constable are not. Some good examples, if obtainable, of the French school of the seventeenth and eighteenth centuries would be highly desirable. Of the current work of France in the nineteenth century there is, perhaps, a sufficiency now in the Museum, but there

are several great names that are unrepresented or poorly represented. The great modern Frenchmen, for whose work a lookout should be kept are, especially, Prudhon, Ingres and Delacroix, Corot and Millet, Baudry and Purvis de Chavannes.

So far we have considered the demands of a gallery of the art of the past for the benefit of the present, and of foreign art for the education of the American artist. Should not the Museum also consider the possible wants of the future and make some systematic effort to acquire a representative collection of works by contemporary American artists, which may some day have a great historical value? Every great gallery of Europe makes such an effort for the art of its own country. France buys pictures in considerable numbers at each annual salon and places the best of them in the Luxembourg. From those, again, the best are selected for permanent place in the Louvre. The Metropolitan should, and might be, the great American museum; but, so far it has done less for the formation of a collection of American art than the museums of either Boston or Philadelphia. If it were to follow the example of the French Government and put aside a certain sum every year for the purchase of American pictures, either from the current exhibitions or direct from the artists, it could form, in a comparatively short time and for comparatively little money, a collection of great future value; and it might, incidentally, encourage serious art among our painters and help to convince a slow people that art really exists in this country. It would be cheaper to buy pictures while the artist lives than to wait till he is dead, and most artists would be willing to accept lower prices from the Museum than from private patrons, knowing that their work was to be permanently placed in dignified surroundings. Of course, the purchases would have to be judiciously selected; but this is true of any purchases, and the collection could, in the future, be weeded of pictures that might not permanently commend themselves.

In all this we do not imagine that we have told the authorities of the Metropolitan Museum anything they do not know, or recommended any course that they would not be likely, of their own motion, to consider, if not to adopt; but, as discussion never does any harm we have offered these few observations and suggestions for what they are worth.

THE WEST FRONT OF THE NEW CATHEDRAL AT WESTMINSTER, SHOWING THE THREE RECEDING PLANES OF THE VESTIBULE, NARTHEX AND NAVE. THE CAMPANILE IS ON THE LEFT.

John Francis Bentley, Architect.

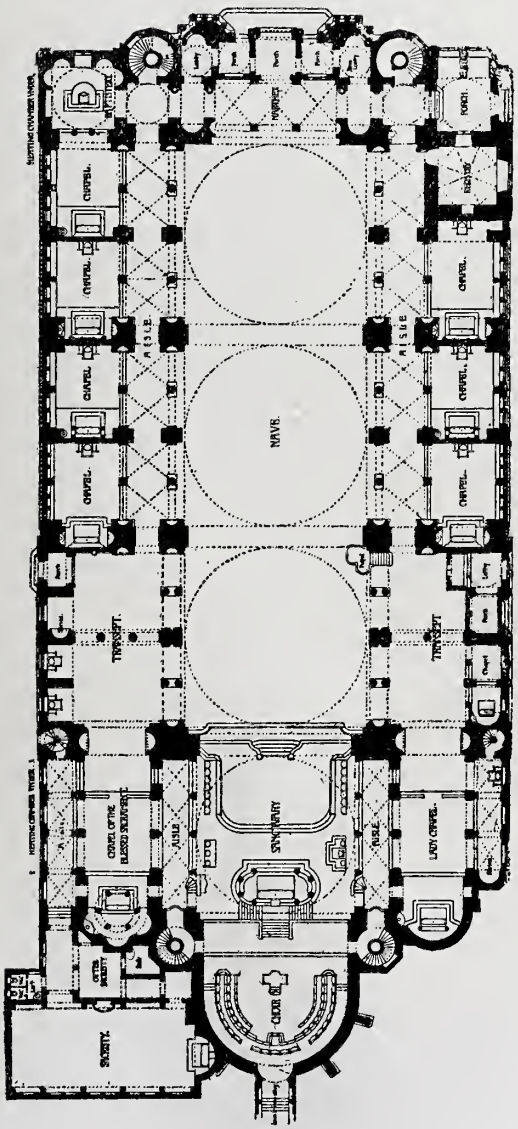
THE NEW CATHEDRAL AT WESTMINSTER.

THERE are still a few people living who may remember the inscription on the Monument wherein the fire of London was ascribed to "the treachery and malice of the Popish faction." It is but 70 years since that was erased, yet to-day, in Westminster, we see another erection towering to a greater height, and speaking not indeed of Catholic supremacy, but at least of Catholic power and pertinacity. We are concerned here mainly with the architectural significance of this new Cathedral, and need not consider whether its erection is a sign of greater religious faith or greater toleration, much less to what extent toleration may be made up of indifference.

Westminster Cathedral stands tenth in superficial area among the Cathedrals of England, but in cubical content it probably exceeds all but St. Paul's. No English Cathedral possesses such a lofty vault, as wide a nave, so high a tower.* It is comparatively short and yet exceeds in length the cathedrals of Chester, Hereford, Rochester, Southwell, Bristol, Ripon, Carlisle, Oxford and Truro. No other building of its class and size has been erected in Great Britain since the days of Wren. What then must have been the feelings of Mr. Bentley when its design was entrusted to his brain and hand. Many young and some middle-aged architects would have given years of their lives for such an opportunity. One wonders if Mr. Bentley determined from the first on advocating the use of a style so far removed from those to which we are accustomed. He might have chosen Gothic (as in the case of his church of the Corpus Christi, Brixton Hill), and thus have courted unequal comparison with those older fanes which are the glories of our medieval cities. Or, he might have selected a Renaissance type and erected a larger Oratory, a cheaper St. Paul's, both demanding a dignified site which was not forthcoming. Mr. Bentley, however, adopted a style novel to English eyes, yet eminently Christian, being the oldest style evolved by Christianity—the Byzantine. Yet, as treated at Westminster, it is permeated with modernism; is economical of ornament; fireproof as regards construction; and religious in total effect, even if somewhat secular in detail like Catholicism itself.

*The domical vaults to the nave are 92 ft. to the springing, and 112 ft. to the crown; the highest vaults at Westminster Abbey measure 105 ft. The new nave is 60 ft. wide between the piers, as against 43 ft. at York Minster, which, however, is only ceiled in wood. (The nave of Brompton Oratory is vaulted and measures 51 ft. across.) The New Campanile will be about 280 ft. high, as against the central tower at Lincoln, which is 262 ft. It is exceeded by the lantern of St. Paul's (356 ft.), and the spires of Salisbury (404 ft.), St. Michael's Coventry (320 ft.), and Norwich (313 ft.).

THE NEW CATHEDRAL AT WESTMINSTER FROM THE SANCTUARY.
John Francis Bentley, Architect.



GROUND PLAN OF THE NEW CATHEDRAL AT WESTMINSTER.
John Francis Bentley, Architect.

One of the conditions affecting the design of the Cathedral when its erection was finally determined upon in 1894, was, that, the site being already hemmed in by lofty flats, some feature of great height was essential to reveal the position of the church at a distance. A tower was selected for this purpose, but a tower of proportions somewhat attenuated. When completed it will be nine times its breadth in height, as against proportions of nine to two in the case of the Victoria Tower of the House of Parliament. This latter is

A CAPITAL IN ONE OF THE AISLES OF THE WESTMINSTER CATHEDRAL.
John Francis Bentley, Architect.

80 feet square as against 30 feet square of the new campanile, and being 325 feet high as against 280 feet, it contains eight times the cubical contents. Considerations of economy then disarm the critic who may feel that the campanile appears already like a plant struggling upwards towards the light, especially as Mr. Bentley has not distributed his means as Mr. Collcutt did in the case of the Imperial Institute. Indeed, towers of these proportions are not uncommon in Italy, and further East we may admire the minaret and pagoda. The feeling then is perhaps due to the English taste for sturdiness,

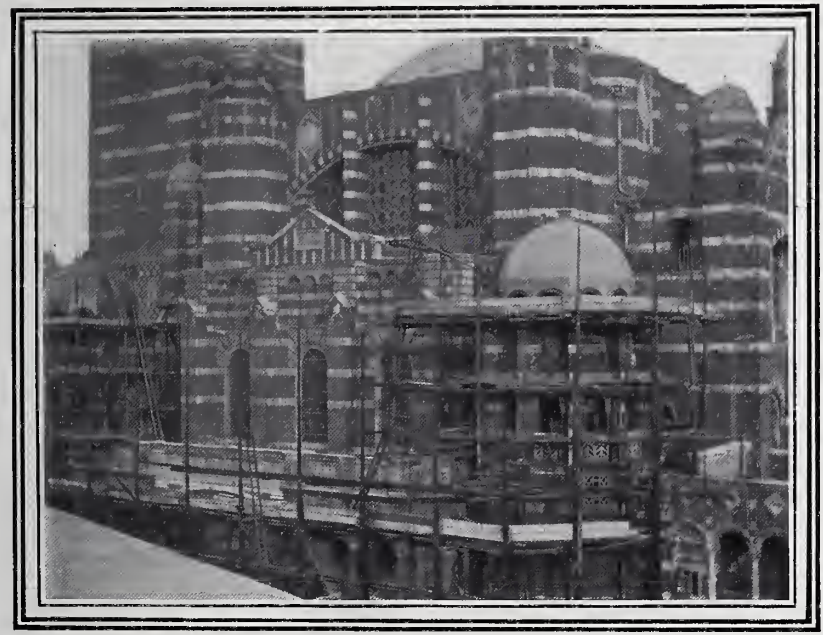
VIEW FROM THE SOUTHEAST WITH THE AISLED LADY CHAPEL IN THE FOREGROUND.

John Francis Bentley, Architect.

ANOTHER VIEW OF THE WEST FRONT OF THE NEW CATHEDRAL AT WESTMINSTER, SHOWING THE SUCCESSIVE PLANES OF PORCH, NARTHEX AND NAVE CAUSED BY NEIGHBORING RIGHTS OF ANCIENT LIGHT. THE TYMPANUM OF THE ARCH WILL BE FILLED WITH MOSAIC.

and he who would enjoy the new Cathedral as such must suppress all bias of nationality and tradition.

In England the west front* is exceeded in breadth only by those of Lincoln (180 feet), and St Paul's (176 feet), and whereas at Lincoln the façade is mainly a glorious screen obscuring the outline of the church, and greatly exceeding the body of it in width, that at Westminster is an organic composition and no wider or higher than any transverse section of the church itself. The front is in three planes, the higher ones receding in a manner which suggests that the design had been partly governed by considerations of ancient lights. If this be so we may congratulate the architect for turning necessity to so good account. The lower plane of the work,

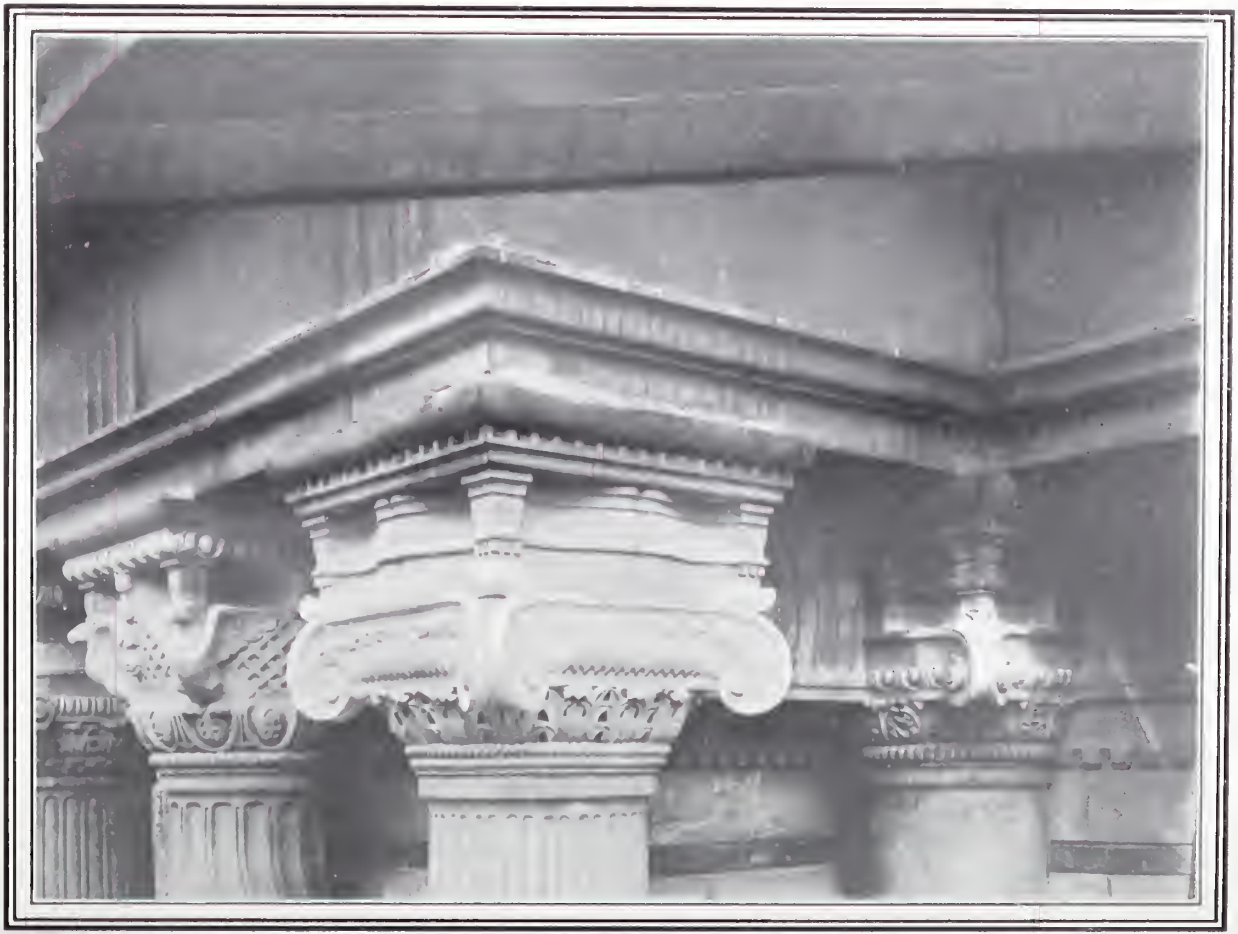


THE UPPER PORTION OF THE WEST FRONT.
The three semicircular beaded windows light the west gallery above the narthex.

which rises from a granite plinth, comprises a triple doorway and tympanum within an enclosing arch of receding orders. These spring from columns fluted only as to their upper thirds in height and connected by a series of festooned and sculptured medallions. On either side are decagonal towers surmounted by copper domes, and beyond these again are the baptistery to the south and a subsidiary porch to the north.

In the second plane we recognize the carrying up of the outer wall of the narthex. This contains three windows surmounted by

*The longer axis of the cathedral lies northwest and southeast, the high altar being at the southeast end, but it will be convenient to consider the church as orientated.

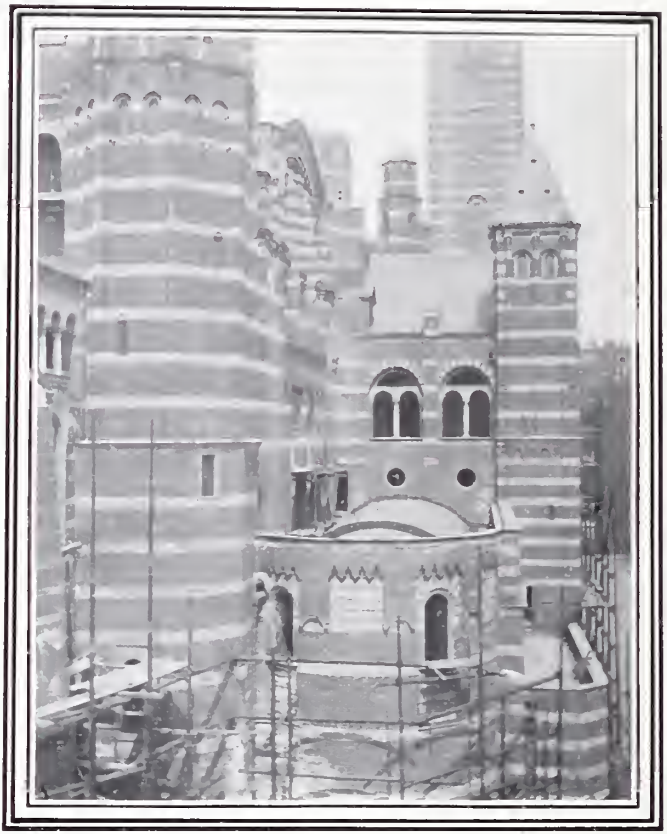


CAPITALS AT THE MAIN ENTRANCE OF THE NEW CATHEDRAL AT WESTMINSTER.
John Francis Bentley, Architect.

CAPITALS AT THE MAIN ENTRANCE OF THE NEW CATHEDRAL AT WESTMINSTER.
John Francis Bentley, Architect.

a row of shell topped niches. Here as in the medallions we recognize that blending of Renaissance "motif" with Byzantine detail which is characteristic of the whole structure, and gives it a certain piquancy.

The third plane discloses the west wall of the nave itself, and is occupied mainly by a segmental headed window following closely the lines of the semicircular transverse arches within, but lessened in span by the flanking turrets leading to the roof. The walls



NORTH TRANSEPT OF THE NEW CATHEDRAL AT WESTMINSTER, FROM THE EAST, SHOWING ALSO THE CONCRETE BARREL ROOF TO THE LADY CHAPEL.

John Francis Bentley, Architect.

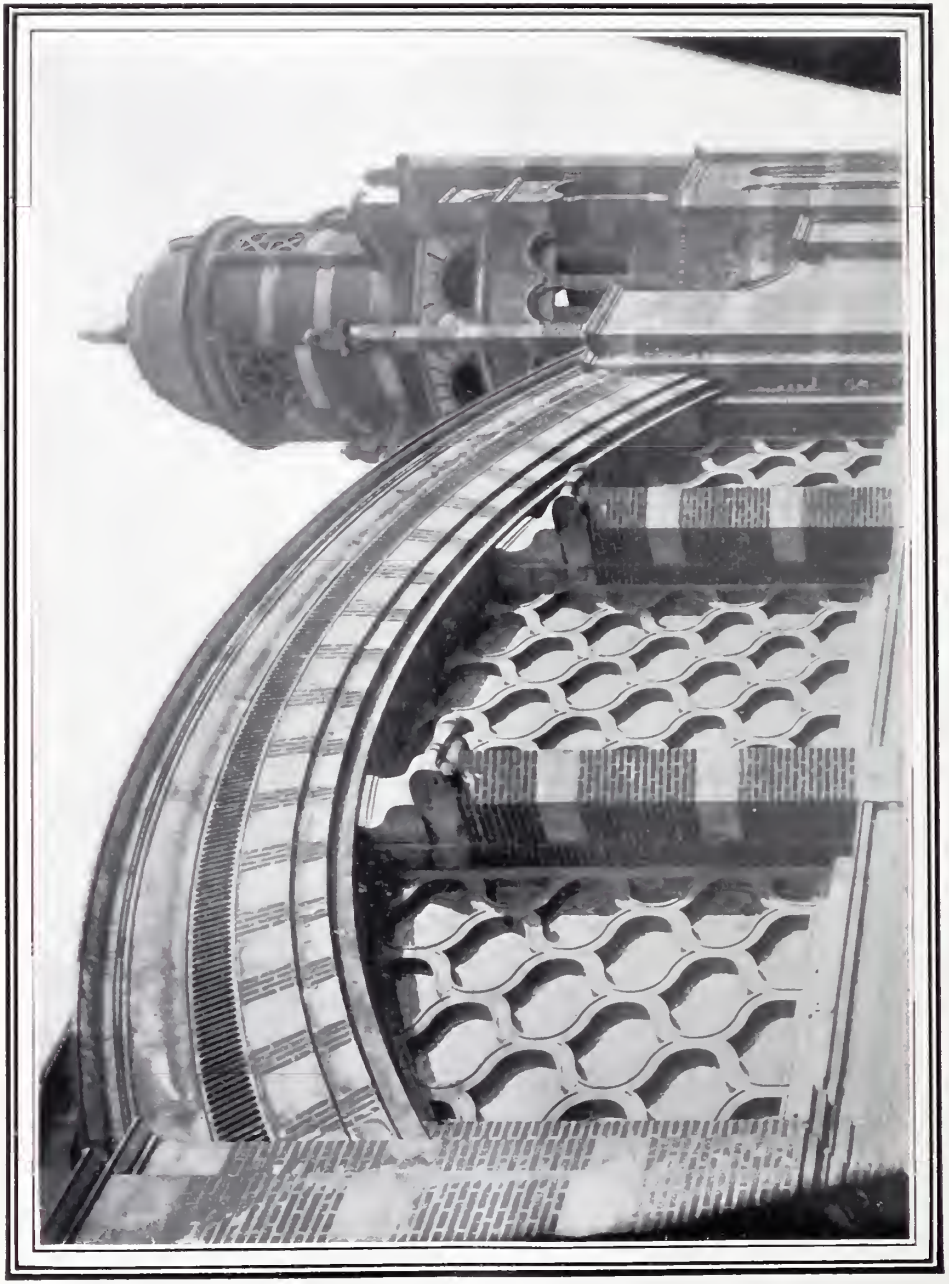
beyond these turrets are really piers bearing the short barrel vaults which are at right angles to the length of the nave and form a series of lateral abutments to the thrusts of the concrete domes with which it is vaulted. Passing to the left into Ambrosden Gardens, one notices above the angle porch previously alluded to, a charmingly detailed balcony approached from doors recessed behind an arcade, the whole showing in conjunction with features

elsewhere the deliberate intention to obtain pleasing effects of shadow. The columns to the doorway beneath are channeled with flutes alternately wide and very narrow; the capitals, too, are of an unusual type. Beyond the tower are the first and second chapels of the nave, which are treated alike with untraceried windows coupled under an enclosing arch, surmounted by a deep parapet wall of brick with frequent stone lacing courses, and interrupted by occasional niches. The third chapel is lit by a couple

STAIR TURRET AT AN ANGLE OF THE NORTH TRANSEPT OF THE NEW CATHEDRAL AT WESTMINSTER.
John Francis Bentley, Architect.

of three-light windows with traceries in the upper portions. Above these chapels rises the lofty wall of the aisle, or more accurately, the curtain wall connecting the buttress piers previously mentioned; and yet higher is visible the wall of the nave proper.

The transept is roofed at a lower level than the nave and terminated with twin gables, being internally ceiled with parallel barrel vaults. These transept ends are almost the only gables on the church, and, taken in conjunction with the square turret at



THE CLERESTORY WINDOW WHICH LIGHTS THE SANCTUARY, SHOWING THE TERRA COTTA TRACERY AND A BAND OF ROUND-BACKED BRICKS IN THE ARCH ABOVE.

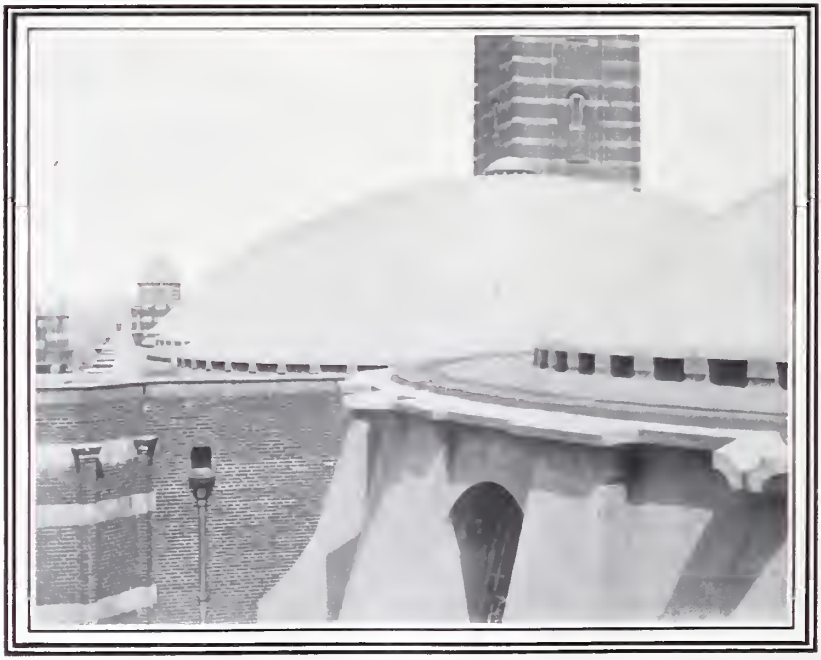
John Francis Bentley, Architect.

the eastern angle of the transept, form a composition less alien in outline than other portions of the structure. The turret is finished with a stone pyramidal roof and connected with the body of the edifice by a short open arcaded gallery, the whole being simply and vigorously treated and somewhat Romanesque in character. The bay of the church beyond the transept comprises the sanctuary, for the raised choir is beyond in the apse. The dome of this bay differs from those of the nave, being rather

THE NEW CATHEDRAL AT WESTMINSTER, FROM THE SOUTHWEST.
John Francis Bentley, Architect.

lower and pierced with circular headed windows in its lower portions. Beneath on either side is a large lunette divided into three parts by V-shaped piers, the intervening windows being filled like several others with terra-cotta tracery. These traceries are varied in character, sometimes leaning to a reticulated type, and at others to more geometrical design, based on the Italian method of pierced slabs, but are built up of separate blocks and carried over the whole surface of the windows. Flanking the sanctuary is the

THE EAST END OF THE SACRISTY OF THE NEW CATHEDRAL AT WESTMINSTER.
John Francis Bentley, Architect.



THE DOMES OF THE SANCTUARY AND OF THE NAVE, SHOWING THE EXTERNAL COVERING OF CEMENT SLABS, ENCLOSING AN AIR SPACE.
John Francis Bentley, Architect.

apsidal Lady Chapel with its own north aisle; the barrel vault of this chapel is recognizable in the accompanying photograph.

We have now reached the apse, which, with its open gallery, steep green roof and foliated iron apex cross, backed by the loftier wall forming the square end of the sanctuary, the flanking towers and white concrete dome between, forms a remarkable and beautiful composition. Viewed from the corner of Ambrosden Avenue,

THE APSE OF THE NEW CATHEDRAL AT WESTMINSTER FROM THE ROOF OF THE ARCHBISHOP'S HOUSE.
John Francis Bentley, Architect.

where the archbishop's new house forms the foreground, or from the end of Morpeth Terrace, where the steep roof of the sacristy occupies a similar position, the picture includes also a transept and the campanile.

Putting aside archaeology, sentiment, surroundings and the softening influences of time, and considering only the design of the architect, how does this east end compare with some of our old cathedrals?

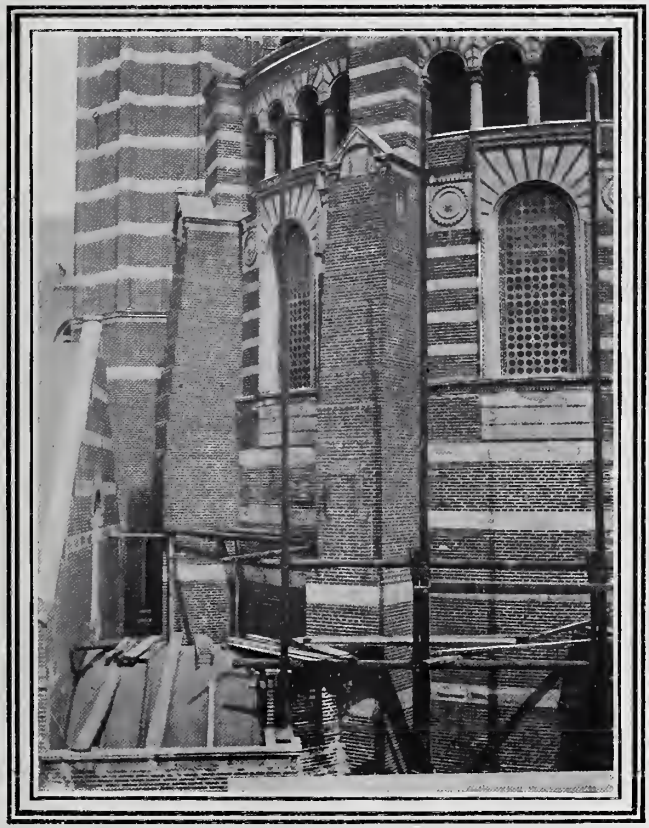
Even if such reservations are possible it is a question that each

much answer to himself. Probably none would rank it with the Nine Altars of Durham, the three gables of Lincoln, with its attendant chapter house, the storied lancets of Ely and its spacious Lady Chapel, the great traceried windows of Gloucester set in rich embattled walls, or the grouped chapels of Salisbury, Exeter and Wells. But when these are catalogued, doubtless arise, and we feel that in external beauty, as well as scale, the new cathedral is not unworthy of its title.

THE UPPER PORTION OF THE STAIR TURRET FLANKING THE APSE.
John Francis Bentley, Architect.

Passing from the general composition of the east end to a brief consideration of its details, we must remind ourselves once more of a certain measure of frugality which the architect has been constrained to observed. Had funds permited, here was a splendid field for the sculptor. The buttress summits, now either plain or finished with capstan-like finials, would furnish admirable bases to groups of organic sculpture, the only examples of which are the birds brooding above the domes of the flanking towers. But

we feel on the apse, at least, that whatever ornament exists, is right. The simple but repeated sets-off to the buttresses impress the eye with being admirably placed, and the one considerable break in the projection of these buttresses is at the point where the vault impinges from within, all above is left vertical as being mere dead load unaffected by thrusts. The semicircular headed windows, with their thickly leaded glazing, are enclosed within a



DETAIL OF THE APSE, SHOWING THE VERY GRADUAL OFFSETS OF THE BUTTRESSES.
John Francis Bentley, Architect.

line of Venetian billet mould, the spandrills being filled by the deeply radiating voussoirs of stone separated by single courses of bricks, a treatment which is repeated horizontally in the aprons below the sills. The type of column used in the arcaded gallery is akin to that of the Romanesque mid-wall shaft, having a capital bearing an oblong abacus adapted to the support of a thick wall with satisfactory effect.

That it is not possible to include within a single glance the full height of the wall rising above the windows is scarcely the fault

of the architect, who has had to compress his buildings within the limits of a town block more suited to a speculative builder than for a temple to the King of Heaven.

Except that the position of the campanile on the north is here occupied by an additional chapel, the south elevation is similar, in most respects, to that toward Ambrosden Gardens. The walls, however, are treated with less detail of herringbone and other

PASSAGE OF THE EXTERNAL GALLERY ABOVE THE VAULT OF THE APSE. THE COLUMNS HAVE THEIR BASES UPON A STRING-COURSE BELOW.

John Francis Bentley, Architect.

ornamental work, because buildings will ultimately largely obscure this side of the church; but, at present the structure can be viewed from a fair distance and judged as a whole. It is here noticeablfe that at the points where the three nave domes abut upon the walls, i. e., in the centre of each bay, a buttress is introduced surcharged with a heavy pinnacle, whereas the buttresses to the transverse arches dividing the bays are distinctly subordinate, probably because the line of thrust is there much lower.

Hence, the bays are not marked with the same emphasis usual to vaulted churches, but there is a statical reason for the departure.

It is at this point we ask ourselves whether the outline of the entire building is satisfactory, and I feel bound to answer in the negative. The long level lines of the parapets are unsatisfactory to eyes accustomed to frequent pinnacles and a steep roof. It may be that Wren did not desire the open balustrade at St. Paul's, but there we have at least a bold cornice to the walls and always the

THE UPPER PORTION OF THE STAIR TURRET FLANKING THE WEST END OF THE NAVE.

dome above. Here the domes are barely visible, being at a great elevation and only two-thirds of a hemisphere in height *internally*. Externally they are slightly less, being constructed of concrete 2 feet 6 inches thick at the springing, diminishing to 1 foot 6 inches at the crown. They are formed with external ribs, resting directly upon which are further coverings of granolithic slabs, allowing a free space for the circulation of air beneath. This prevents unequal expansion of the concrete consequent upon hot sunshine

without and cool air within. The doubt arises whether as outer shells were considered necessary it was advisable to make them of the same curvature nearly as that of the inner domes. Truth of expression would not really have been sacrificed had the outer domes greater rise, for, now, although the whole structure is based upon domical principles, from most points of view it appears to have a flat roof. It would not have been necessary to have had such an absolute contradiction of curve as in the case of those added to St. Mark's, Venice, to have presented in perspective a series of cupolas forming a worthy crown to so magnificent a nave.

An alternative would have been to have left the nave domes as at present and constructed a much loftier one above the sanctuary, thus emphasizing the position of the high altar, and adding to the skyline where it seems most wanting. It must be remembered, however, that the weight of such outer domes could not have been carried down to the springing of those beneath without the aid of timber and iron, and these materials have been excluded, from the nave at least, as too perishable. Then, too, there is the ever present consideration of cost. Outer domes might conceivably be added if the donor were forthcoming, as in the case of Brompton Oratory.

Very little has been said about the materials employed, and it is only proposed to refer to them in so far as they intimately affect the design. It is interesting to know of the millions of bricks used and the thousands of tons of Portland cement and sand, but such facts have been described elsewhere. The walls generally are faced with red bricks 2 inches deep only, but with wide mortar joints. The dressings, bands and copings are of Portland stone. The bricks are laid in a variety of ways, herringbone fashion, and even on end; they are introduced singly between stone voussoirs, used as label moulds, and take their turn among the orders of receding arches. Some in frequent use for arches are semicircular on face, and produce a series of graduated shadows, as shown in the last illustration. Green slates are used for timber roofs, but asphalted concrete holds undisputed sway over the greater part of the edifice. The glazing is set in leads of unusual width, and consists of bulls and and flat glass of a greenish yellow shade.

In conclusion, we feel that although most allusions to the new cathedral by the press have been distinctly unfavorable, we possess, at Westminster, a building which is likely to exercise a far greater influence on church design than any purely Classic or Gothic structure could have done at this stage of architectural evolution, and one which will occupy a more important place in the history of the styles than most of the buildings of the Gothic revival.

Fifteen years since, when the proposed cathedral at Liverpool was under consideration, a well-known architect suggested that the Byzantine phase of classic art was capable of far greater development than it had hitherto received. Within the last seven years Mr. Bentley has shown the truth of this statement at Westminster. Liverpool it still waiting and discussing. Should a competition of designs be held for the new cathedral on the Mersey, it will be surprising if the influence of Westminster be not then already visible, if only in the wide range of style considered applicable to a great church.

Mr. Bentley has come as near the development of a new style, as it is probable one man ever can, without the invention of some new method of construction. His Neo-Byzantine is as distinctive as the Neo-Romanesque of H. H. Richardson. The curious thing is, however, that whereas the latter consistently developed his favorite style through a long series of works, Mr. Bentley has hitherto given us examples of English Gothic, or English Renaissance, sometimes with suggestions of Flanders, or the Chateaux of the Loire; but not, so far as the writer is aware, anything approaching in construction or detail the character of the work under consideration. It is the artistic and inventive intellect of the man visible throughout the whole structure, which gives Westminster Cathedral its chief interest in the eyes of architects. The lay mind can scarcely be expected to detect this fully at first, but recognition of it must ultimately come to all who study the building with sympathy.

F. Herbert Mansford.

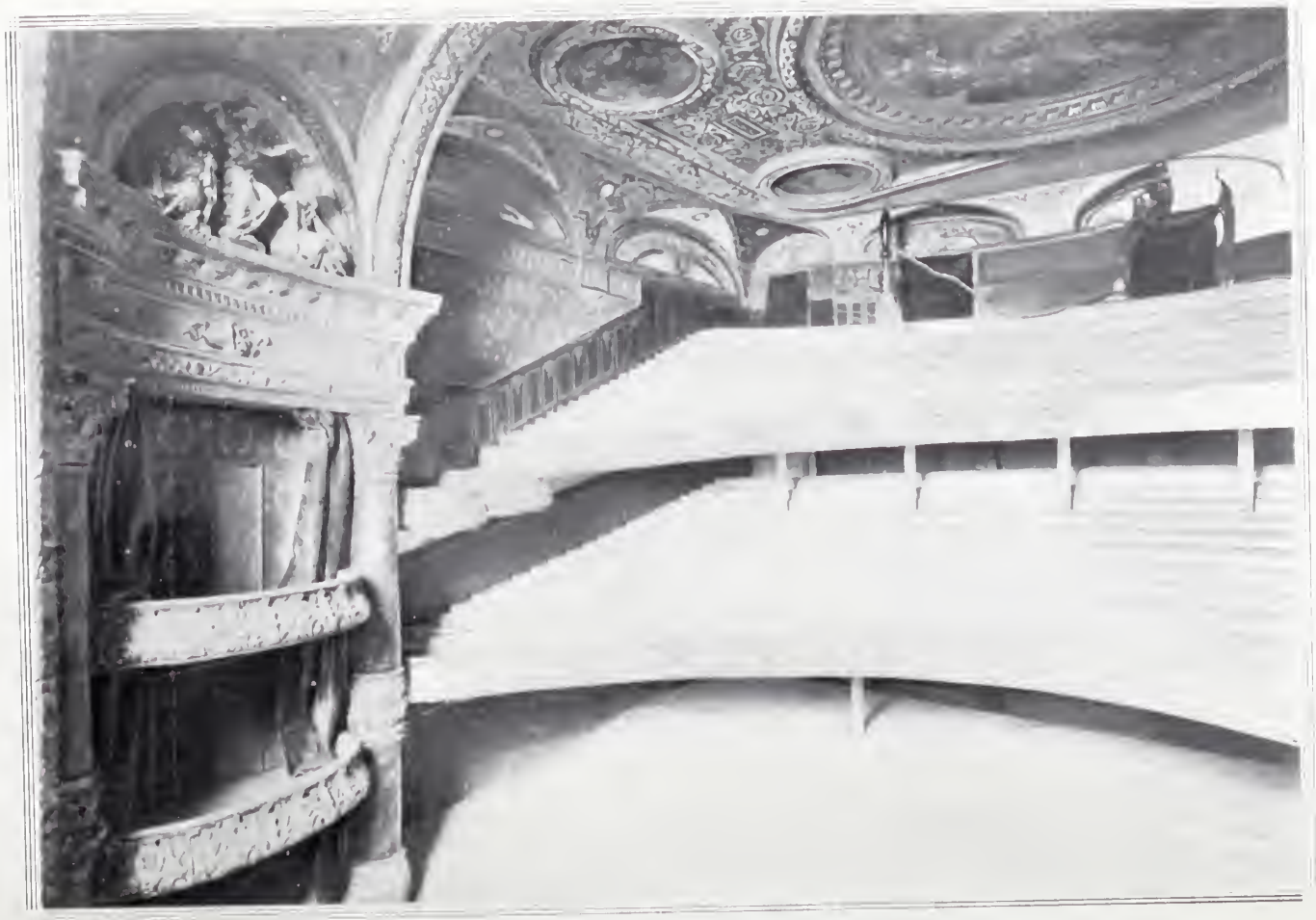
AN ART NOUVEAU CABINET.

THE ARCHITECT'S PORTFOLIO

OF

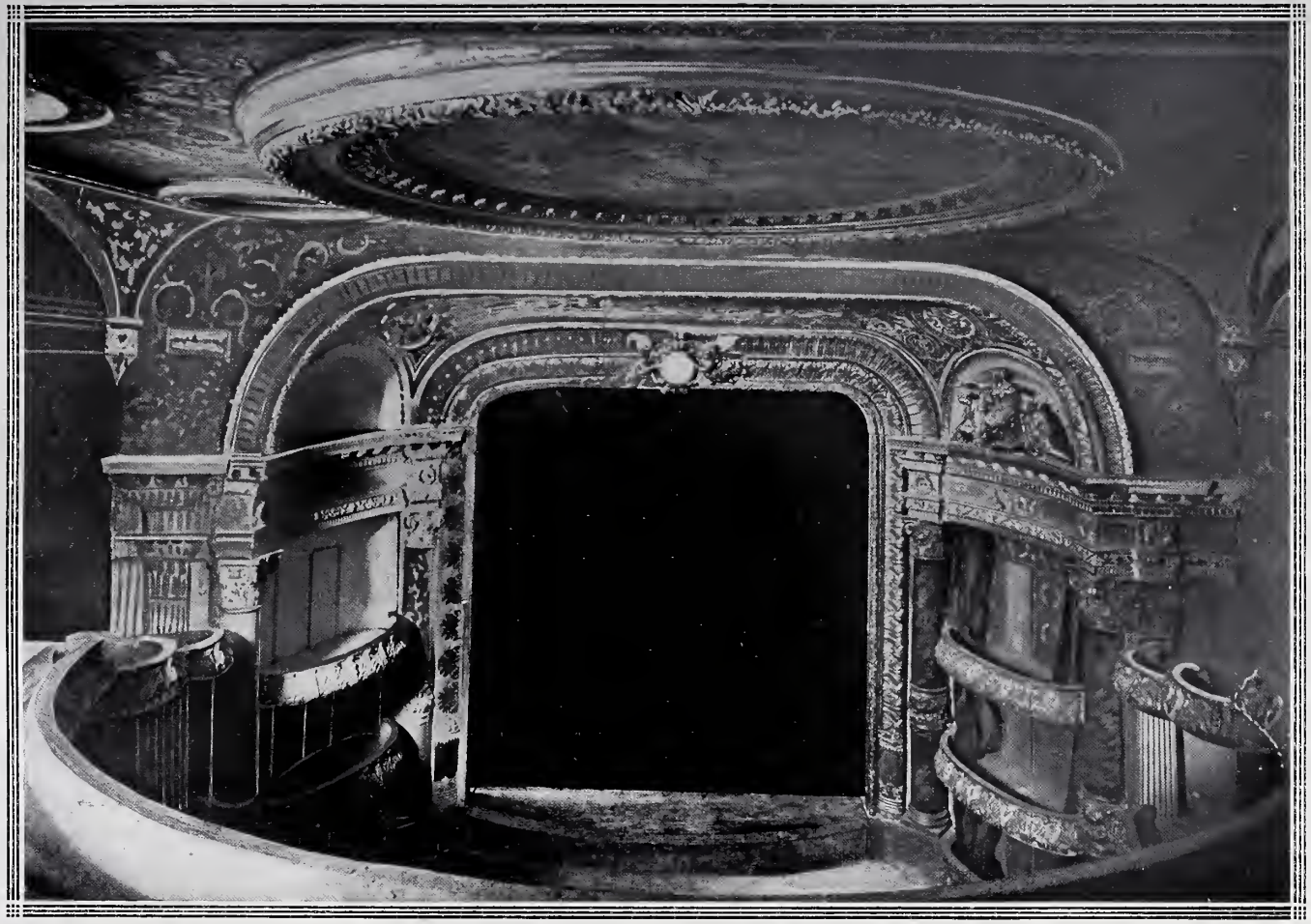
RECENT AMERICAN ARCHITECTURE.

A CHRONICLE IN BLACK & WHITE



INTERIOR OF THE BOSTON MUSIC HALL ON MASSACHUSETTS AVENUE.
McKim, Mead & White, Architects.

Boston, Mass.



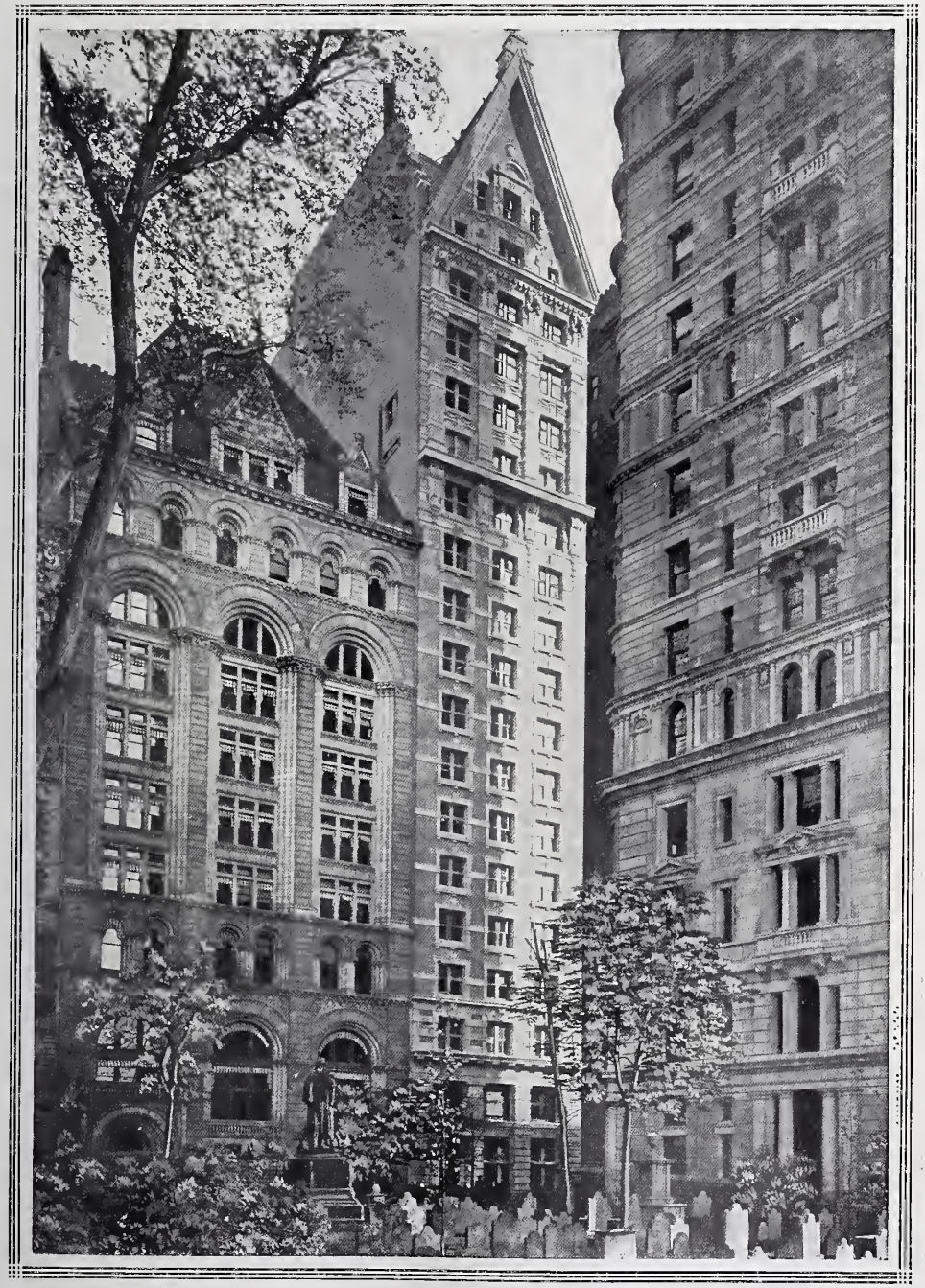
INTERIOR OF THE BOSTON MUSIC HALL ON MASSACHUSETTS AVENUE.

Boston, Mass.

McKim, Mead & White, Architects.

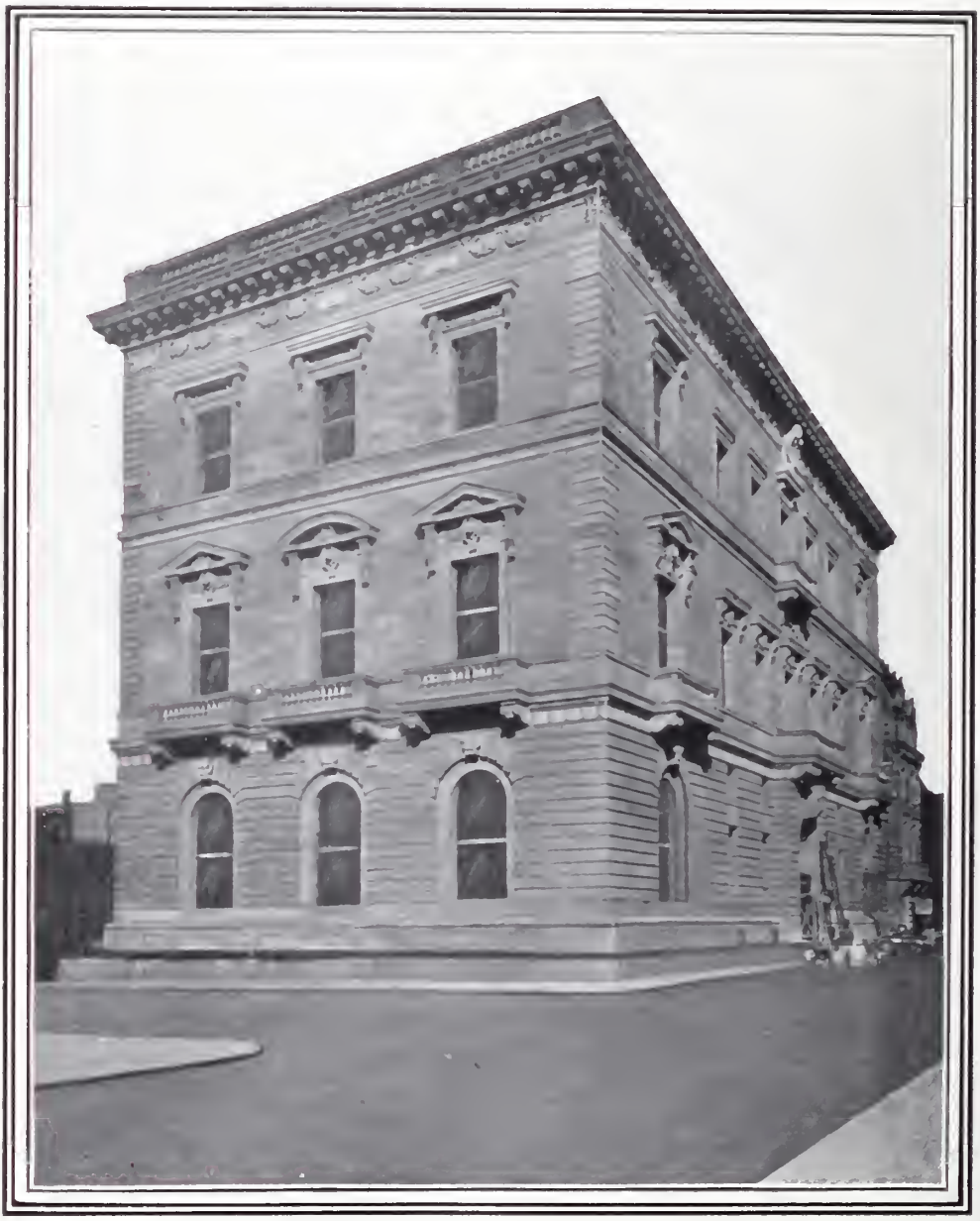
OFFICE BUILDING.

Southeast Corner of Broadway and Maiden Lane, New York City. Clinton & Russell, Architects.



THE CENTURY BUILDING.

Nos. 72 and 74 Broadway, New York City. Bruce Price, Architect.



THE NEW BUILDING OF THE UNION CLUB.

Northeast Corner of Fifth Ave. and 51st St., New York City. Du Fais & Cass Gilbert, Architects.

HALLWAY IN THE RESIDENCE OF GIFFORD PINCHOT.

Dupont Circle, Washington, D. C. Heins & La Farge, Architects.

DINING-ROOM IN THE RESIDENCE OF GIFFORD PINCHOT.

Heins & La Farge, Architects.

Dupont Circle, Washington, D. C.

LIBRARY IN THE RESIDENCE OF GIFFORD PINCHOT.

Heins & La Farge, Architects.

Dupont Circle, Washington, D. C.

Opinions Official and Unofficial.

A Museum of Photographs.

In the New York Evening Post and Nation there appeared recently an article favoring the creation by the New York Public Library, the Library of Congress, and others of our great libraries of "reference libraries of art reproductions" for the systematic study of art history. This article was inspired by, and quoted from, one of the lectures delivered by Sir W. Martin Conway as Slade Professor of Fine Art in the University of Cambridge, and now published by E. P. Dutton & Co., in a volume entitled, "The Domain of Art." Sir Martin had been recommending to his students the formation, by each, of a systematically arranged collection of photographs of works of art, and goes on to say: "What the individual student is thus recommended to do for himself on a small scale should be done for every historical art museum on as large a scale as possible. In short there is room for a great collection of reproductions of all the art of all the world, organically arranged in the manner I have thus suggested." What, in fine, he advocates is less the formation of reference collections by libraries or existing museums than the foundation of a special institution for the study of art history, a museum of photographs. The proposal is not a new one; Sir Martin had himself advocated it when art professor at Liverpool and, in this country, Mr. Kenyon Cox has discussed such a project at some length in an article published a good many years ago in the New York World. Several partial collections have already been formed, but nothing approaching completeness has been attempted.

It is hardly necessary to dwell upon the usefulness of such a museum to students of art. Modern criticism and modern connoisseurship are based almost entirely upon the facility of comparison of one work with another which is afforded by photography. A complete conspectus of the art of the world in photographic reproduction would be such an engine of scientific and historical art-study as the world has not yet seen. As many of the greatest works of art are immovable and many more are already the property of national museums, from which it is inconceivable that they should ever be removed, this country can never rival the old in the possession of the world's historic art treasures, and there is, therefore, for us an added reason for the creation of such a museum of reproductions. On the proper organization and arrangement

of such a museum we cannot do better than quote from Sir Martin Conway.

"To carry out the whole plan of such a museum," he says, "would not be so simple a matter as may at first appear. . . . In fact the collecting alone is a complicated work, but the arrangement of the collection would take far more time and would involve the collaboration and advice of many experts. The great age of Italian painting from Cimabue to Tiepolo might perhaps be fairly completely represented by 20,000 photographs of pictures and drawings. . . . That would enable us to produce a kind of illustrated index, chronologically classified, of all the chief paintings and drawings that have come down to us from the old Italian schools." This collection should be so arranged that the student, "by turning over the contents of a few boxes" should be able to study practically all the works of a given artist in the order of their production. "He would find the genuine pictures separated from others merely produced in the workshop under the master's eye. He would find a note on the margin of a doubtful picture. If it is attributed by critics of weight to some other artist he would find that fact stated, and he would likewise find a duplicate photograph included in that master's work. . . . The collection should be accompanied by one or more card catalogues . . . the cards, duplicated or triplicated if need be, might be grouped together according to any principle likely to be of use," so that, for instance, one might know where to find all pictures of a given subject.

Such would be the organization of a single section of the proposed museum. We would add the suggestion that duplicate photographs of the capital works of each school and master should be framed and hung upon the walls in chronological arrangement, so that the casual visitor should find a kind of panorama of art history before him without the labor of consulting catalogues or taking down boxes. It is here that the advantage of a special museum over a mere reference collection in a public library would be most conspicuous.

We think the writer in the Post and Nation has greatly underestimated the cost of such a museum. He takes Sir Martin's figures for Italian painting alone, £3,000, and allowing twice as much for all other schools of painting puts the cost of a complete collection for painting at $45,000, and concludes that "a gift of $100,000 would provide generously for the establishment and maintenance of a reference library of art reproductions." This is, of course, assuming that no separate building would be needed and but a small addition to the regular library staff, but even so it is far too low an estimate, for it takes no adequate account of sculpture

and architecture which would each cost as much as painting—architecture would probably cost far more. But not even with these three great arts would the ideal museum rest satisfied. To them should be added "mosaics, miniatures, bronzes, medals, embroideries, furniture, metal work," the art of the world. "The complete collection would begin with the simple implements and the engraved and carved bones of prehistoric times. It would follow down the stream of human activity through the polished stone age to the introduction of metals. It would reproduce the objects discovered by excavation on the most ancient Egyptian and Chaldean sites. It would bring together as complete a series as possible of the work of all kinds of artists in ancient Egypt, Babylonia, Assyria, China, Peru—in fact, of every country where art ever existed and enshrined the ideals of human aspiration. If such a museum of photographs were expanded to include casts of ivories and electrotype reproductions of small objects, such as coins, still more if it were linked to a large historical collection of casts, the result would be a museum, whose contents would indeed possess a relatively trifling intrinsic value, but whose utility as contributing to the increase of an understanding of the course of evolution of the human mind would surpass that of any existing institution. The proposal may seem a large one, but there is nothing impracticable in it. Though the sum of money ultimately required would no doubt be considerable, it would only be wanted in comparatively small amounts at a time. The main requisite would be skilful experts in sufficient number to organize and arrange the very cheap materials which already exist in countless multitudes."

The scheme *is* a large one, but it will surely be realized some day and somewhere. With our multi-millionaires searching for worthy uses for a part of their millions, what reason is there that its realization should not be begun here and now?

Cold Storages for Books.

The Mediaeval towns and cities of the twelfth and thirteenth centuries had their cathedrals or abbey-churches; the early Renaissance communes of the fifteenth and sixteenth centuries had their hotels de ville and rath-houses; it is in something the same way that the modern American towns and cities have their public libraries. The old centers of union and action no longer command undivided allegiance. The one church has disintegrated into many churches, a doubtful rationalistic moralism frequently taking the place of religion. The City Hall is not and cannot be to the same extent an object of single-minded and hearty devotion, not only because of

the bad odor of local politics, but also because the nation has been substituted for the commune as the chief center of political allegiance. The public library, on the other hand, stands for much that is best in an American community. Take, for instance, the case of New York. In order to bring the library machinery of that city into existence the rich, the comparatively poor and the community in its collective capacity have all contributed. The benefactions of Messrs. Astor, Lenox and Tilden laid the foundations, that of Andrew Carnegie broadened them, and a score of individuals have added their share in starting and supporting local borough libraries. The city itself has added to this total the cost of the central library building, and that of maintaining most of the branch libraries. Hence, when the service is established, it will represent a combination of private generosity and public spirit, persistently applied throughout half a century such as have contributed to the formation of no other local institution; and the Public Library Building in Bryant Park will symbolize some of the most deeply rooted and salutary ideals of the American democracy—its faith in education, in the power of ideas, and in the necessity of making these educational and intellectual influences broadly popular.

The change from the cathedral and the city hall to the public library as the symbol of the better life of a community may not be altogether commendable; but, in order to make the best of it, we must understand the public library as standing broadly for popular education and enlightenment. In itself, a library is only a collection of books, and there is not so much virtue in reading a book as many people imagine. The value of a library consists in the fact that it provides passive material upon which the active educational forces in a community may work. Consequently, libraries have been collected abroad chiefly as the necessary machinery of university work, or as repositories of the national literary and historical archives, which scholars may investigate and translate for the benefit of their fellow countrymen. In the United States, also, books have been accumulated for these purposes; but the object of the public library of to-day is obviously much less special and much more popular. Although not ignoring the scholar, it is aimed primarily to provide for the largest possible circulation of all kinds of books, and while the currency it gives to a vast mass of ephemeral and worthless print is as much of an evil as a good, still the active educational influences, disseminated by schools of all kinds, are sufficiently pervasive and powerful to make it an indispensable and valuable auxiliary in the great work of university extension. And just as the college library, instead of the chapel, is now the center around which the buildings of a university are grouped, so the public library incarnates the thousand invisible forces which are

making for the spread of useful information and liberal and humane ideas.

If public libraries do play as important a part in the modern American communities as that we have described above, it is obviously desirable that the buildings in which these libraries are housed should be impressive of the amount of this importance and expressive of its character. Here is surely a peculiar opportunity for the contemporary American architect. Mr. Carnegie and others are paying for new library buildings at the rate of hundreds every year. There is hardly a city or a respectably sized town in the country which has not just built, is not building or will soon build, such a structure—the one structure in the town which, as we have pointed out, commands undivided allegiance and unfailing, if somewhat lukewarm and impersonal, interest. What is the American architect doing with this opportunity? A special library number, recently published by the "Architectural Review," enables one to answer this question without taking any very extensive travels; but the answer must be, after a careful inspection of the many examples of recent buildings which the number furnishes, that they are not doing very much. In making this answer, we frankly ignore that part of the design of such a building which is of primary interest to the designer. The interior arrangement of the modern American libraries are in most cases managed with great ingenuity, and are admirably adapted, as many of the earlier American libraries were not, to the convenient circulation and economical storing of a larger or smaller number of books. But however successfully these buildings are being planned, little or no headway has been made toward the development of a design, or of a type of design, which is appropriate to a library and which will tend to make them familiar and inviting to the people who use them.

The majority of the designs figured in the special number mentioned above are merely frigid examples of neo-classic school-pieces. They look as if the architects, emancipated from the restraints under which they usually suffer in designing commercial buildings and residences, were irresistibly impelled to draw façades such as they are frequently obliged to draw during their school training, and so they get up some commonplace arrangement of columns, a pediment, varied by arched or square openings, and flatly monotonous and uninteresting. No more depressing exposure could be conceived of the imitative and academic character of American design, and its inability when dealing with a fresh and interesting problem to treat it in a fresh and interesting way.

A library is a place in which books are stored, and to which men go to read them in quiet and leisurely surroundings, and this description applies as well to public as to private libraries. The former

necessarily possess more spacious dimensions and more abundant facilities for the circulation of people and books; but the condition remains that it is the reading-room which, from the point of view of the public, gives the building its character and associations. But a reading-room is much more closely related to domestic architecture than it is to that of Senate and Court Houses. It is used by private people for their own private purposes, and not by public officials, whose duty it is to enact, execute and expound the laws, and the design of a building in which such a reading-room is situated should be domestic, familiar and inviting—the sort of a building in which a man would go to read, and not to deliver an oration or to hand down a judicial decision. What, then, could be less appropriate than these frigidly and meaninglessly classical buildings, which have no associations with books, and which are entirely lacking in the atmosphere of quiet and retirement which is essential to any and all kinds of a library. It is, of course, difficult and even impossible to get in a building of very large dimensions the effect and atmosphere mentioned above. A more stately and important air is not incongruous with the public library of a large city. This stateliness and importance need not indeed afford an excuse for an academic formalism of treatment, but it inevitably subtracts from the domestic atmosphere appropriate to a smaller library building. The consequence is that the more expensive structures in the larger cities tend to be the best, not only because they are usually designed by more skillful architects, but also because the prevailing classic and Renaissance treatment is better adapted to a building of ample dimensions and imposing situation. In the smaller buildings, however, the architects, under the influence of their academic training and imitative methods, have gone utterly astray. They have designed merely a collection of marble and granite cold-storages for books, under the erroneous idea that everything public must be classical and irrelevant, and one of the most discouraging aspects of the matter is that in cases of competitions it was frequently the most stiff and wintry design of all which was selected. Mr. Carnegie could not perform a better service for American architecture than by placing the supervision of the designs of all the libraries for which he is paying in the hands of a well-chosen group of architects, who would have it in their power to emancipate the designing of small libraries from the colorless and meaningless formula which now prevails. Fortunately, this step has already been taken in case of the branch libraries in New York City.

THE OCTAGON, ELY CATHEDRAL.

THE ARCHITECT'S LIBRARY

THE ARCHITECTURAL ANNUAL. Edited by Albert Kelsey. Folio. Issued for 1901. Pp. 302. Philadelphia: The Architectural Annual.

"The Architectural Annual" for 1901, which has just made its somewhat belated appearance, has what may be called a "syllabic" dedication. It is dedicated—to express in figures the rounded periods: I., To the Architectural League of America, "the embodiment of an earnest aspiration for the advancement of American architecture as distinguished from the promotion of architectural practice;" (1), To the League's national committee on municipal art; and (2), To Mr. Cass Gilbert, the committee's first chairman. It is dedicated, II., To the American Institute of Architects; and III., To Congress. The dedicatory sentences explain that "I." is chosen because, with its sub-heads, representing "the initiators of the movement for the organized improvement of city making;" "II." because to its re-enforcement are "due the most notable specific results" yet obtained; and "III." in acknowledgment of "the wise appointment af an incomparable commission to study and report upon the future development of the national capital."

This dedication is important. It indicates the scope of the volume, its special interest, and its aim. There is set up by it the standard by which the volume should be judged—the true standard, apart from all such material attractions as profuse, pertinent, interesting and beautiful illustration; as fine paper, clear type, and those various excellences of manufacture and arrangement which adorn the book, and which, indeed, do something more even than add to its attractiveness, because also increasing its value as at once a treasury of information and an incentive to continued progress along the lines of civic art. The dedication shows what was in the mind of the editor, what was the goal he had set before himself, in the pursuit of which all these other things were incidental—what was the end to which they were to be the material means. Obviously, "The Architectural Annual" for 1901 is not, then, to be judged solely as an architectural work. It has launched into a field that has been less exploited, that is now developing so rapidly that it sorely needs an annual chronicler, that has a slenderer past than has architecture, but a future that may be amazing, that makes its appeal not to a profession only but to all the dwellers in organized communities. For "The Architectural Annual" promises, in the "Announcement," which supplements its dedication, that "year by year it will be enlarged and enriched to reflect the birth and growth of organic city-making in the United States." If, because its editor is an architect, because it is dedicated to the great national associations of architects, and because it has adopted an architectural title, it approaches this many-sided subject from the architect's point of view, it has, then, done all that the architect ought to ask. And it does this singularly well, so providing him with a record that in like completeness he has nowhere else. Reporting year by year and "step by step" the "civic improvements at home and abroad" most notable from the standpoint of the progressive, the public-spirited, and the broad-minded architect, it has a function all its own and of extreme importance.

The current Annual is the second to appear, and it shows distinct improvement over its predecessor. This is especially notable in the first score or more of pages, which are editorial. They are divided into a multitude of brief, pungent, earnest articles, hardly averaging more than 300 words apiece. Even the busy reader has time to look at these, and in each he finds crystallized a thought that repays him for the perusal. Between each article and

the one that follows is a short and pertinent quotation, printed in italics, and incidentally relieving the monotony of a large double-columned page. The sources whence these phrases come range from Emerson to Roosevelt, from Matthew Arnold to the Springfield "Republican," from Goethe to the late Mayor Bolton of Ohio! It is not so much who says the thing as the thing he says that counts; and it is worth a note, since architects do not pretend to be builders of phrases, that the profession is well represented. There are quotations from, for example, Sullivan of Chicago, Carrère of New York, Atchison of London, and Benard of France.

After the editorials there is printed in full the annual address of Robert S. Peabody, as President of the American Institute of Architects, 1900. Then come several pages illustrating the competitive models for the national Maine monument; and then an illustrated article on the work of Louis H. Sullivan, whose portrait forms the frontispiece of the volume. Following this there are a number of articles (for the most part reprints) on phases of civic improvement effort, and a multitude of interesting pictures illustrating work projected, under way, or accomplished, large and small. The Annual presents by this means an extremely interesting and valuable compilation of articles that have not before appeared in the architectural press, and that, scattered widely through the newspaper and general periodical literature of the day, has been buried to most architects; and that has, certainly, lacked heretofore, much of its significance for want of a sympathetic environment and of any illustration—now lavish and intelligent. And the value of these illustrations is immensely increased, and the pictures are made to the layman instructive, by printing beneath the more important of them brief comments, appreciations and criticisms from the artistic standpoint, that indicate with full assurance and trained judgment their principal merits and defects.

If one would make criticism of the book, it is that in these pictures—which should offer an illustrated history of the progress of civic art during the year—there is too little space given to public buildings. The answer may be that these are too seldom "art;" but a current statement that the gifts for public library structures alone during the last few months have exceeded thirteen millions of dollars, suggests that if there be little which is good in the designs that have been made to carry out the purpose of these gifts, it would be well to show some bad designs that the negligence of so remarkable a civic opportunity may be appreciated. But the pictures chosen cover a wide range, both in subject and in geography, and offer a review that will doubtless be generally satisfactory.

At the end of the volume there is a "Directory," in which are noted the two leading national associations for general civic improvement work, the architectural publications of the United States—with a few words of description and fearless comment for each of these; and a review of the leading books of the year that are pertinent to the subject of town and city improvement.

The publication as a whole reflects, thus, great credit on its editor. It is a satisfaction to learn that already the volume which preceded it is at a premium. The main general fault with the present issue is one that can be easily remedied another year, and that, meanwhile, even enhances the value of the volume. It is that its edition is limited to one thousand (numbered) copies, printed from movable types. The demand for the work should justify an edition several times as large as this, and if the established standard of excellence can be maintained the demand will come, and come imperatively. The movement of which the Annual is the exponent is striding forward tremendously, and to none does this progress mean more than to architects.

Vol. XII (WHOLE No. 48) No. 4

The Architectural Record

September, 1902

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The
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MODERN ITALIAN ARCHITECTURE.

I COME now to the second part* of my paper on Modern Architecture in Italy, on the architecture of private buildings. This subject must be presented by districts, for, if there is any branch of architecture which has kept free from academic influence, it is private residences. Our art schools like to keep the tone of their instruction upon a very high level, and the houses of the middle class are not worthy of the solemnity of their teaching, which is chiefly influential in monumental architecture. By the side of this architecture, æsthetically empty, there rises the private residence, less solemn, but more sincere, which in Italy changes as you pass from north to south.

This residence architecture may be divided into two groups: On one side we have apartment houses, on the other private dwellings, palazzi, and villas. In Italy as elsewhere the artistic quality of the second of these groups is very much better than that of the first, but houses of both kind have been in demand since the renewal of building in Italy, and both kinds had to be supplied. But before I enter into a description of particular buildings, the general conditions, which prompted this renewal of building, and which were largely the outcome of the political revolution, should be explained.

That the political revolution resulted in equally revolutionary changes in the architecture and building of Italian cities was due to the fact that the former governments entirely neglected the questions of rural sewerage, drainage, and transit. Our largest cities, Florence, Venice, Genoa, Rome, Naples, Palermo were so many congested, infected and loathsome spots. Not even at present have the problems regarding public works so far as they concern private architecture been solved entirely; and Milan, the most active and most enterprising city of Italy, the city where the social problems are discussed with the utmost precision, has insalubrious localities condemned to be demolished, but not as yet demolished. I must add that, Mantua, quite close to Milan, a city which in the history of the Renaissance played one of the leading parts, has not yet lost its ancient "Ghetto," a place which was formerly occupied

*For first paper, see Architectural Record, No. 4, Vol. X. Whole No. 40.

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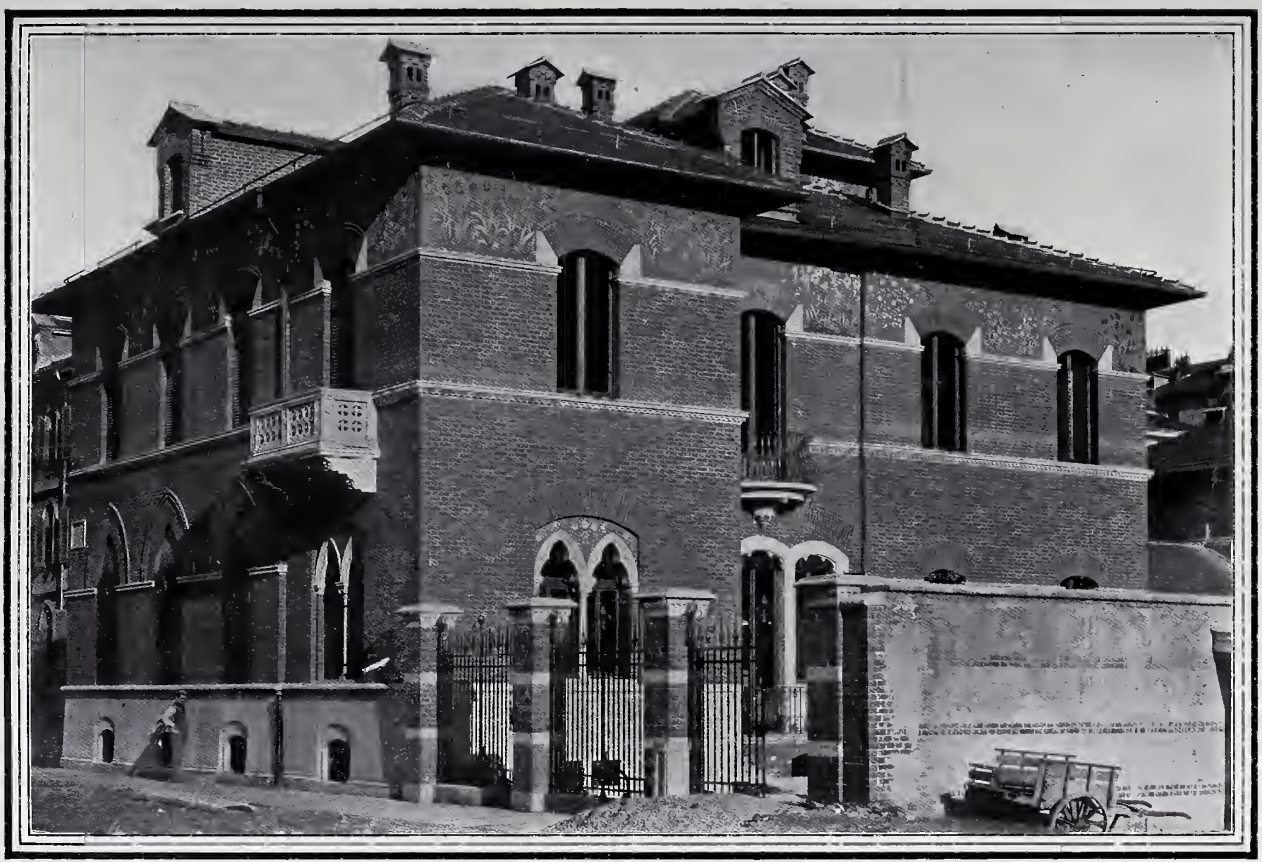
by the Jews, and which represents the most disgraceful evils imaginable; and this in the very centre of the city.

The problems of improving the sanitary condition of Italian cities, which is necessarily associated with the development of residence architecture, are both interesting and difficult. They have occupied the attention of our most distinguished social students: and many designs have been submitted for the purpose of reconciling hygienic improvements with a proper respect for historical monuments. In the case of Florence, for instance, the problem was particularly acute, because the centre of old Florence, around the market place was from a sanitary point of view in a deplorable condition; and when the proposal was made to introduce desirable hygienic improvements, several different parties came to the front—among which was one group that would improve everything regardless of historical monuments, and at the other extreme a group, consisting mostly of foreigners, who did not want a stone to be changed. As a matter of fact it was the first group that had their way, and their way was bad for the new centre of Florence. The sewered and drained centre of the Athens of modern Italy, does no honor to Italian architecture. Leaving aside the triumphal arch, which was illustrated in the first of my papers, and limiting myself to private buildings of the present, I must assert that Florentine architects are deficient in imagination. They have more than their share of the traditionalism which infects Italian blood. If they have to erect a monumental palace they cling to the design of Palazzo Strozzi; if a residence or country house is wanted, they fall back upon the style of Brunnelleshi, and compose a façade, exhibiting an absolute respect for straight line and symmetry. The façade always has the round door in the centre, and on the sides windows decorated with pediments, while on the second and third floors, the windows are likewise adorned alternately with rectangular or curvilinear pediments. The ensemble is sometimes pretty, but eternally the same—pretty also, because of that pietra serena, a stone of bluish color, which has been adopted by the Florentine architects, and which gives the buildings a charm and decorative accent of an original and local beauty. But these architects are timid; they have no force and inspiration. When they were forced by the building problems connected with the new centre of Florence to design apartment-houses of many stories they turned to Milan, where everything connected with modern life receives the stamp of richness and grandeur.

People, however, who wish to study modern Florentine architecture at its best, should go to the less recent parts of the city, the "Viale dei Colli," and the "Lungarno." In the neighborhood of the Jewish temple, already published in this magazine, they will find



MAISON MARIETTA.

Turin. S. Molli, Architect.

broad streets, and a fine square, called the Piazza d'Azeglio, with many pretty houses roundabout, and villini or cottages. The little houses on the Viale dei Colli look, surrounded as they are by pretty garden plots, like flowers set in verdure. One of the most charming of them is the Villa Oppenheim, where the Empress Eugenie and Prince Napoleon lived in 1876. You must not expect to find in the palaces of the Lungarno and in these cottages the picturesque and vivacious lines of the pretty English and North American cottages. The Italian architecture, as a rule, is hostile to vivacity; and if just at present, some architects, instigated by the English fashion, which is getting hold of our country, try to enliven the outlines of the buildings, they are introducing a system entirely outside of the Italian custom and altogether recent. Thus no important constructive problem is taken up by our architects.

In Venice the new building movement has not had as much chance to construct or to destroy as it has elsewhere; but even here the partisans of the straight line have been doing a great deal of harm. Truth to tell the city of Venice is losing that local color which is its principal merit; and the modern architects are less mindful than they ought to be of the integrity of their city. I say the architects, but I might say, the Venetians; and, frankly, Venice, instead of rising out of the waters gay and full of charms, as she did in former days, seems nowadays to emerge gray and dirty from a muddy flood. One need only look around while passing over the "Canale Grande" in a steam launch, the "Vaporetto," to be convinced that Venice is passing away. Even the Municipal Palaces are disfigured, and if I were to write on the present Venice, instead of writing to you on the private buildings of modern Italy, I could tell you a good many things about it. It is enough here to say that the Technical Bureau of Venice, attached to the city administration, has not one architect among its staff. All questions that are dealt with are of technical and administrative character; art is absolutely subordinated to mechanical questions. And this in a city like Venice, and in an office which should direct the building tendencies of a place which owes its celebrity in this world to the beauty and plasticity of its architectonic forms. Just at present a new bridge had been projected over one of the lagoons in Venice. This project, like everything else serving to disfigure the city, has its partisans and its opponents; its partisans are recruited among those who care for "business" and who have less than little interest in the artistic integrity of the city; the adversaries are made up of artists, literary men, who cultivate the beautiful and loathe "business." It looks as if the latter will this time carry the day against the utilitarians, and, as an Italian proverb says: "If there are roses, we shall see them blossom."

In the city of Genoa the utilitarian spirit prevails. A great deal of money has been spent on new buildings, but the Genoese merchants and mariners are indifferent to beauty, and the result is unmentionable. But "La Superba" holds an important place in the architecture of the "villini," and the natural beauty of the two "Reviere" between which the city extends has been well used by several architects, who have built many country houses facing the sea and surrounded by a wonderful vegetation. As an example of these I take pleasure in showing you a villa, which has been designed to animate its surroundings with a picturesque silhouette, and to harmonize with the shrubbery and landscape, as a kiss unites mother and son. This Villa Schmidt is the excellent work of F. M. Parodi, one of the architects of the chateau called Montegalletto at Genoa, and it must appeal to all those who like beauty in simplicity. I am very glad that its author, my worthy friend, has given me permission to publish it here; and I have only to regret that I cannot reproduce the color with the outline and mass. It is not by chance that I place by the side of it another painted "villino," that of the Casa Marietta at Turin, which was designed by the architect S. Molli, and possesses something of the same feeling. It must not be supposed, however, that these two examples of colored houses are typical. Italian architects, although they have before their eyes, the façades of Venice, Verona and Mantua have shut their eyes to the charms of polychromy. I may add that the Turin villa cost $12,000 in American money, and the house adjoining it, used as a printing office, $8,000 more.

I have named Rome, the capital of Italy, which, since 1870 when the temporal power of the Pope fell, has been remodelled in several parts and has laid out new roads, so that now a third Rome has been built by the side of the Imperial Rome and the City of the Popes; and it is no exaggeration to say that the private architecture is here superior in interest to the monumental architecture. I have said before that the style of modern architecture at Rome is Roman and Bramantesque. The most gifted architects are here so entirely under the van of Roman and Bramantesque power that even with compass in hand, they cannot get away from the influence of these suggestions. Among the recently opened streets in the modern Rome, the "Via Nazionale" is the most remarkable and characteristic one. Rich in new palaces, this street commences at the Exedra of the Diocletian Thermes; it runs perfectly rectilinear with a width of 24 metres to a certain point, where it makes a right angle and descends to the Piazza Venèzia, on which is the celebrated Palazzo Venezia, one of the finest palaces of the early Renaissance at Rome. Here, this monumental road comes to an end. It was commenced before 1870 by Mgr. Xavier de Merode and was fin-

VILLA SCHMIDT.

Near Genoa. F. M. Parodi, Architect.

VILLA SCHMIDT.

Near Genoa. F. M. Parodi, Architect.

ished under the management of the engineer A. Viviani. From out of it another imposing street opens, the "Via Cavours," still broader than the Via Nazionale; it runs from the railway station (southwestern side) to the square of the Esquilino near the Basilica S. Maria Maggiore. In this street, the architects of Rome, or rather of Italy, for since 1870 Rome has become distinctly a metropolitan city, have erected structures which bear witness to the building activity. I must also call your attention to the Piazza Vittorio Emanuele, the largest among the new squares of modern Rome; it is situated in the district of the Esquilino and is surrounded by monumental buildings with porticoes and a pleasant lawn embellished with fountains, basins and cascades. Fourteen streets open upon this square from different parts of the great city. To illustrate the architecture of moden Rome, I send you a view of the Palazzo Bocconi on the Via del Corso. Thus one of the most important industrial buildings of modern Rome has been erected on that Corso, which was the street of old Rome, in which the life of the city was centered. Situated near the Piazza Colonna, it is the heart of modern as it was of Papal Rome, and every foreigner will remember it because of the Colonna Aureliana or Antonnia. The Palazzo Bocconi was built by the architect G. de Angelis, after the model of those great industrial buildings in Paris, such as the "Bon Marche," and is used as a department store. It has been designed along classical lines. It is only necessary to add that this building is erected on a plan of 25 metres square; its ground floor is intended for the sales, and the two upper floors are intended one for the fitting of garments and the other for residences of the staff. As for its construction, the walls of the perimeter are dressed in brick, covered with plaster, the ornaments being emphasized by gilding; the interior is of iron, half cast, half wrought, covered with a resistant varnish, of good effect; the whole, like the outside, inspired by the style of the Renaissance, the infatuation of Italian architects.

We have another proof for this infatuation in the Villa Buoncompagni, a work of the architect G. Kock; his German name must not surprise you, for, aside from the origin of this architect, his work is absolutely Italian. The architecture of the Villa Buoncompagni is of a more brilliant character than that of the Palazzo Bocconi; but the source is the same.

But at Rome, as at Naples, there is also the Roman and the Pompeiian, and the text changes. Yes, the text changes, but it is as with the music of Pulcinella, the more it changes, the more it is the same. The house and studio of Siemiradzski, designed by A. Azzurri, is, however, a graceful specimen of the adopted Pompeiian or Hellenistic style. To complete the picture we need

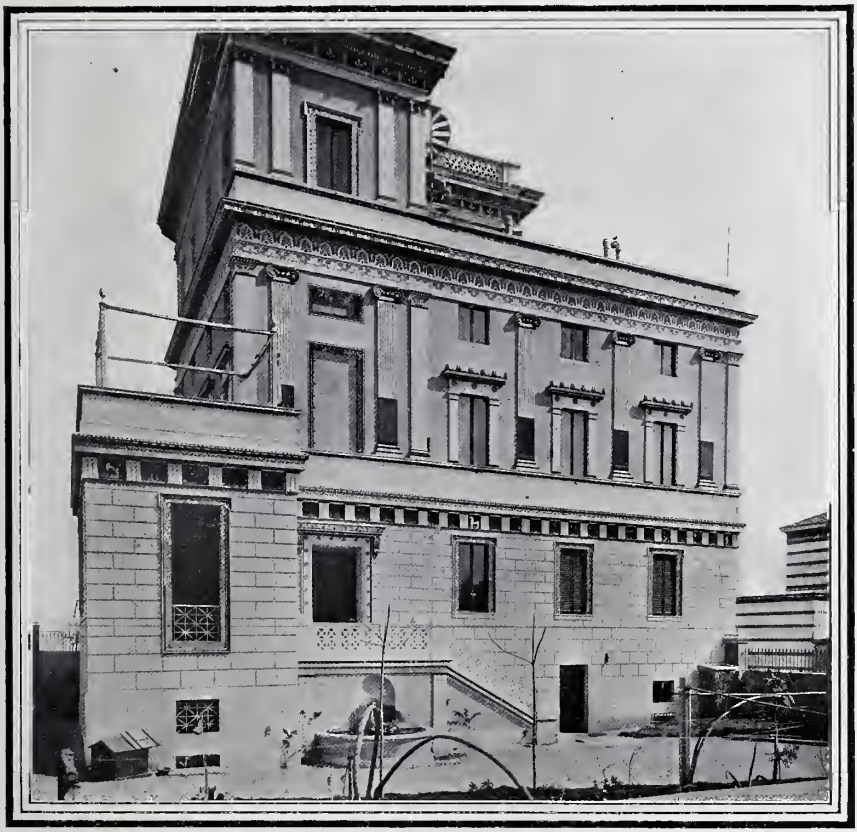
PALAZZO BOCCONI.

Via del Corso, Rome. G. de Angelis, Architect.

VILLA BUONCOMPAGNI.

Rome.

G. Koch, Architect.



RESIDENCE AND STUDIO IN ROME.
Owner, the Painter, Siemiradzski. A. Azzurri, Architect.

only some bacchanti, such as Siemiradzski, the famous Polish artist, paints with so much enthusiasm. It goes without saying that the brilliant coloring contributes much to the eminently decorative aspect of this house, built by M. Azzurri, one of the oldest architects of Rome; a Roman and a former President of the Academia di San Luca, famous in the annals of Italian art, but at present living on the glory of the past.

Coming to Naples, it should be premised that the most interesting sanitary problem in Italy has been solved in that city—the most interesting because of its proportions. The matter was forced not only on the people of the city, but upon the Italian Government by the fierce outbreak of cholera in 1884. It was shown conclusively that the city could not be made clean and healthy so long as some of its poorer districts were left unchanged. But the undertaking was too great for the resources of the municipality; and the Italian

Parliament vote 100,000,000 francs for Naples, one quarter of which was set aside for sewering the entire city. The sanitary improvements were combined with the erection by a company of some economical dwellings, which were very much needed in that city, where the rents paid by the very poor are much higher than elsewhere in Italy. The modern building activity at Naples did not, however, stop at this point. Two wide avenues had to be opened up in connection with the improvement—the Corso Garibaldi, and the great Corso Re d'Italia—on which were built fine mansions. The latter opens upon a square, the Piazza Depretis, which is or-

CORSO RE D'ITALIA.

Naples.

namented with palaces, designed by the architect P. Onaglia, who, attempted here, as is so often done, to reconcile art with economy.

The North! The North, in Italy, reminds me that I have not yet spoken of Milan, the "Industrial City," which, although respected by epidemics, has nevertheless found it necessary likewise to introduce a new plan, if not for hygienic reasons, yet for reasons of public convenience and embellishment. People who saw our city twenty years ago, and even ten, will find her greatly changed today, especially around the cathedral. Aside from the outlying districts which have also received a number of new buildings, and some

of considerable size, a large and rich road has been opened which leads from the Piazza del Duomo to the Château of the "Porta Giovia," one of the extremities of the city. Looking at these divers palaces, and at these apartment houses, one understands at once the diversity of temper between Lombard and Tuscan, or rather between the architects of Florence and those of Milan. The former, timid, as I have said above, cling to the traditions of the Renaissance; the latter take no orders from tradition, and, without irreverence towards the past, show a spirit of independence for which you would search in vain among the architects of Florence. And

PIAZZA DEPRETIS.

Naples. P. Onaglia, Architect.

pardon me, if I insist on this point, which marks the difference of character between the North and the South and the capital difference between the buildings of Tuscany and those of Lombardy.

In my opinion, the reason is general rather than restricted to the architects. Lombardy wants to rise in all lines of modern activity; it loves effort, new ideas, everything which will lift it out of the routine surrounding it; its architects, prompted by these sentiments, have abandoned the fetish of the past—especially the young men, who, on the contrary, have started upon the conquest of a modern architecture, which, with more or less original form, answers

VILLA FAVALORO.

Palermo. M. Basile, Architect.

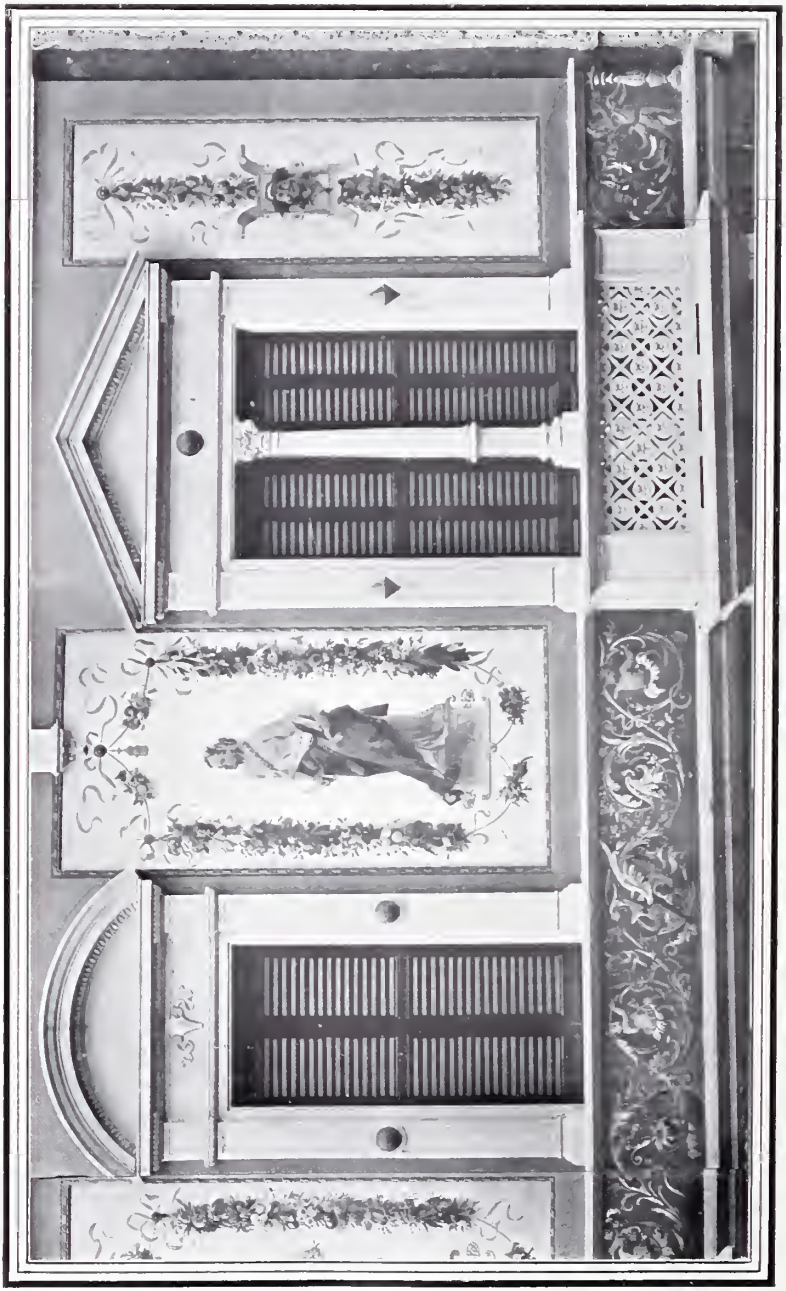
APARTMENT HOUSE IN MILAN.

G. Piravano, Architect.

to new wants. It cannot be said that the buildings of Milan, all of them express this new point of view; but it is the tone of this Milanese architecture, the force and independent tone, which makes a favorable impression. It is here, among the models which I am sending you. One only represents the order of ideas which I wish to point out to you, that of the apartment house erected by the architect E. Zanoni, whereas the house of Bagatti-Valsecchi, whose architects are its owners, shows a deep respect for tradi-

APARTMENT HOUSE IN MILAN.
A. Zanoni, Architect.

tion. But we have here to do with a curious and unique case—men like Bagatti-Valsecchi look at architecture with the eyes of the past only, and, like the outside, all rooms of their house are decorated in the style of the Renaissance, with the most absolute respect for the rules of ancient æsthetics, even there where modern requirement clash with the forms of the past! One part of this house, like that of another house built by the same designers, in the same spirit, is made up of ancient fragments and the other parts, modern, are copied or modelled after existing monuments.



DECORATED FACADE.

On an Apartment in Milan. A. Tagliaferri, Architect.

CORNER OF A DWELLING IN MILAN.
Bagatti-Valsecchi, Architect.

We have, therefore, to do with genuine counterpieces intended and realized with a rigidity which is without equal.*

The Renaissance prevails in the other plans to be published by you; but you will notice that in the façade of the architect G. Pirovano, as well as in the detail of the architect A. Tagliaferri, the style has been followed without pedantry, and you will be struck in the façade of Pirovano by the successful manner in which a house of several stories has been composed provided with an enormous number of openings. The American architects, accustomed to solve problems of this kind, sometimes rather complicated, will not take the same view as an Italian architect of the result obtained by Mr. Pirovano; his æsthetical aim was also to give an aristocratic look to an apartment house, a dwelling of the bourgeoisie, but his tone is just a little academic. The façade published by you has received the first prize at the competition, arranged by the municipality of Milan, of façades intended for the "Via Dante," the first one among the modern streets as to beauty and monumental character of its buildings. Even the detail of Mr. Tagliaferri belongs to this same "Via," which bears witness to this activity of Milan, but discloses likewise to those who look behind the scenes, that sometimes building problems are disastrous for those who take them up with illusions colored like the sea of Palermo. I mean to say that the "Via Dante" has found its victims among the contractors, the architects, the capitalists who saw in the exploitation of this "Via" the gold which the leaders of English finance saw in the Transvaal. However that may be, Milan has recently been decorated with a series of sumptuous palaces, on a site where a labyrinth of narrow dark lanes crossed one another. I need not add that these new houses, provided with all modern improvement, elevators, electric light, drinking water, corresponds in their interior to the wealth displayed outside; you can guess so much. Even in Italy, the care for the "home" has been raised to the proper level, and either "stylism" or the free imagination embellishes the apartments with mural decorations, paintings, and furniture. And since Italy has entered into the movement of the New Style and this style has commenced with the rejuvenation of the furniture, it goes without saying that Milan above all, or Turin, the seat of the Exposition of Applied Art of 1902, will receive in future the blessings of the new beauty, of beauty rejuvenated at the bosom of sincerity, the enemy of the imitation of the Old Art.

Alfredo Melani.

*Something similar has just been done at Venice (in 1901) on the Grand Canal. The new Hotel Grûmrald has been erected in the style of the Venetian residences of the XV. century, by making use of antique fragments collected in the stores of the antiquarians; even the bricks have been chosen among old demolished buildings, so that this house, due to the architect, M. Sardi, has not only the lines of the Venetian architecture of the XV. century, but even its coloring and spirit, thanks to the ancient materials gathered and put to fresh use. This is an excess of imitation and copying work which I cannot praise, the more so, since we have to do here with a structure of entirely modern character.

A FRENCH METHOD OF CEMENT CONSTRUCTION.*

II.

VERY satisfactory example of a building constructed of *ciment armé* has been given us by M. de Baudot, diocesan architect, lecturer at the Musée du Trocadéro and president of the section of architecture of the *Société Nationale* (former *Salon du Champ de Mars*), who has brought to bear upon the employment of *ciment armé* the precision of a mind accustomed to reason out the things pertaining to his art.

In France there are, in art, as in politics, two categories of men —the independents and the followers of the government. The *Ecole des Beaux-Arts* is the seat of official teaching, while M. de Baudot belongs to the independents, and when one sees the results in stone and marble in our public places of the teaching imparted by the "Beaux-Arts," one fells an irresistible impulse to go and see what the independents are doing and hear what they have to say. M. de Baudot lectures at the Trocadéro every Thursday in winter, and he says some very sensible things. He speaks about the architecture of the Middle Ages, and that of the Renaissance. He shows how the problems set by the requirements of religious worship and the economical conditions prevailing at the time, the state of the materials, roads, etc., were admirably solved in the long run by the architects of the Middle Ages. We refer to their system of vaults and independent arches, which constitutes the style of architecture absurdly named Gothic. They arrived at their solution by searching for it in a rigidly logical spirit, and they created the only organic style in architecture that the world has known since the Grecian epoch. Then he shows how that logical spirit which had constituted French architecture, got lost little by little in the sixteenth century; how Italian elements became mingled with the French tradition and disturbed it, and how the habit of reasoning was dropped, with the result that ere long there ceased to be any style, properly speaking. The French neo-classic outstripped its rivals, Italian, German or English, but the true architectural tradition was lost.

M. de Baudot is too intelligent to believe that it is possible to revive an architectural style. He does not care for the neo-classic, and has no liking at all for the neo-Gothic. St. Patrick's Cathedral in New York would fill him with horror, as does the Paris Madeleine. What the ancient Greeks created, or what the French of the Middle Ages created, was the most perfect style for them.

*For first paper see Architectural Record, No. 47, Vol. XII., No. 3.

It is precisely in the concordance of a style with the period and the requirements of every kind to which it has to respond, that lies the primary cause of its greatness. We are not ancient Greeks, nor mediaeval Frenchmen, we are moderns. Have we a style worthy of the name? Assuredly not. We imitate and adopt in a clumsy way. Our neo-Greek is pitiable, our neo-Gothic absurd. There have been heavy imitations of Romanesque, at a useless expense, when the materials which we have at our disposal are quite different from those which hard necessity obliged the eleventh century Frenchmen and Germans to employ.

Can it be supposed that if the builders of the twelfth century had had steel girders at their disposal and could have transported big blocks of stone over long distances at a small cost, they would have wasted their time and money in the construction of rib-vaults? No, practical and economical as they were (for it is only since the seventeenth century that enormous sums have been spent to attain very poor results), they would have sought for, and found, different forms. Furthermore, being artists and men of logic, they would have created the iron style, a thing which we seem to be incapable of doing. Let us then have the sense to borrow from the architects of the Middle Ages, not their forms, nor their processes of construction, nor their materials, nor their decoration, which latter constitutes an integral part of their style and would die, is dying in fact, if it were separated therefrom; but let us borrow their method, their manner of dealing with building problems, and their logical spirit. Then, perhaps, if we do not produce masterpieces of our own (*chefs d'oeuvre* do not spring forth spontaneously), we shall at least prepare the way for those who come after us to do so; we shall clear the ground for them and endow them with a good education, as well as some needful rules of logic.

Such is the thesis developed by M. de Baudot, with an abundance of examples to support it. He studies the past, not as a disinterested observer, but as a man preparing for the future.

M. de Baudot does not confine himself to lecturing to classes; he practices. For the moment, the only works of his which I will mention are the Lycée Lakanal, a brick building in which brick is treated as such, and a small but very interesting church at Rambouillet, which Mr. Russell Sturgis has placed before the readers of the "Record" in his "Recent Examples of Good Architecture."

M. de Baudot was present at the birth of *ciment armé*: he looked at the child, saw it was vigorous but ill-formed, and asked himself whether it could not be so trained as to become, not a freak, but a man. After using *ciment armé* in the restoration in a modern way of some old buildings, the opportunity was afforded him of constructing a church, in Paris. The conditions of the problem,

those primary facts of the case, which so many critics overlook, and yet which are the first considerations that present themselves to architects, were the following. The church was to take the place of one of the earliest Christian monuments of Paris, the old Church of Saint Pierre de Montmartre, which had been found to be too small. The new structure was to be erected, not at the public expense, but by private subscription. Montmartre is a poor district, and the vicar collects very little money. On the top of the hill stands the Church of the Sacred Heart, an immense monument in the erection of which more than thirty million francs has been expended. Yet the vicar of Montmartre had scarcely 300,000 francs wherewith to begin the building of his new church.

M. de Baudot, to whom he addressed himself, saw a fine opportunity for putting into practice theories which he had long ago matured in his mind, theories with regard to building well and yet economically. He asked himself whether *ciment armé* was not the new material which would enable those two conditions to be fulfilled. Nothing interesting had been done so far with this process, and it was worth while to make the attempt at any rate. The ordinary methods of employing *ciment armé*, however, did not appear satisfactory. The material itself is ugly and does not lend itself readily to any decorative effects. Besides, walls built of *ciment armé* cost a good deal of money.

But an engineer, M. Cottancin, has found another and more architectonic means of utilizing *ciment armé*, and his process is worth describing. As is known, *ciment armé* consists essentially of iron wires embedded in concrete or cement, the result being a homogeneous block capable of withstanding considerable pressure and considerable strain. In the Cottancin process, the essential feature of *ciment armé*, viz., iron wires surrounded by cement, is retained; but something is added. Take bricks of the ordinary dimensions with six holes pierced through them. In building your wall, place your bricks flat-wise in the usual way, and end to end. Pass wires through the holes, from top to bottom, and pour in cement to fill the holes. When these wires have been placed, run other wires along the wall, attaching them to the vertical wires. In this way, at a less cost, you form the wires, bricks and cement into a solid block. You have, besides, an immense advantage over the ordinary process, namely, that of building in brick, an economical material which favors architectonic effects and decoration, which can be more or less elaborate, according to the requirements. This is the process of which M. de Baudot availed himself in building the Church of Montmartre.

A careful description will show clearly how the wall of the church is formed, according to the Cottancin process. Two sorts of bricks

were used for it, the larger ones for the outside wall and the smaller, pierced with three holes, for the inner walls. Here and there, the two walls are united by piers, thus forming a well-bonded whole possessing great strength. M. de Baudot has not been afraid to carry to a height of 30 metres a wall having a thickness of only 11 centimeters and 7 centimeters. It should also be stated that the space between the two walls makes an insulator of the first order.

The plan which we reproduce also shows how the floor is made; that is, by a trellis of iron wire covered with cement, supported by compact strips of wire and cement starting from the piers. The result is that the entire structure, walls and floor, forms one solid mass.

The strength of these floors, which are only 5 centimeters thick, can be judged by the following fact. The Church of Montmartre is double. Owing to the slope of the ground, it was deemed advisable to have a lower church, to be used as a catechism room and for the holding of certain services. The ceiling of this lower part of the edifice is the floor of the upper church. It is made in the way we have described. Now on this 5-centimeter floor stood the necessary scaffolding for the erection of the upper church, and in addition to this there was the weight of the walls, the roofing, and the piers themselves, resting upon it. It bore the strain splendidly.

We present to the reader M. de Baudot's actual plans and elevations, for the church itself is still in course of erection, and a lawsuit with the municipality of Paris, who do not permit the use of *brique armée* in the construction of edifices under their supervision, has caused a stoppage of work for the present.

Fig. 1 shows the configuration of the ground. The church is bordered by two narrow streets, steep and bent. At the front, the entrance to the upper church is on a level with the street; at the apsis the lower church is on a level with the ground.

The lesson taught by this edifice lies in the simplicity of the constructive idea and the logical manner in which it has been developed. The piers are built to sustain a given weight and withstand a given strain, and they have the requisite strength, but being in *brique armée*, their dimensions, as can be seen by the various photographs we reproduce, are very small. Certainly, they bear no likeness to the massive stone columns characteristic of the Roman orders. The city committee which is entrusted with the inspection of public buildings uttered cries of terror at the sight of these slender pillars. M. de Baudot answered them with the following sound argument: "When you, official architects, construct a public edifice, if you have need of columns destined to bear heavy weights, you no longer construct them of stone, but of steel. A steel pillar a few centimeters in diameter satisfies you.

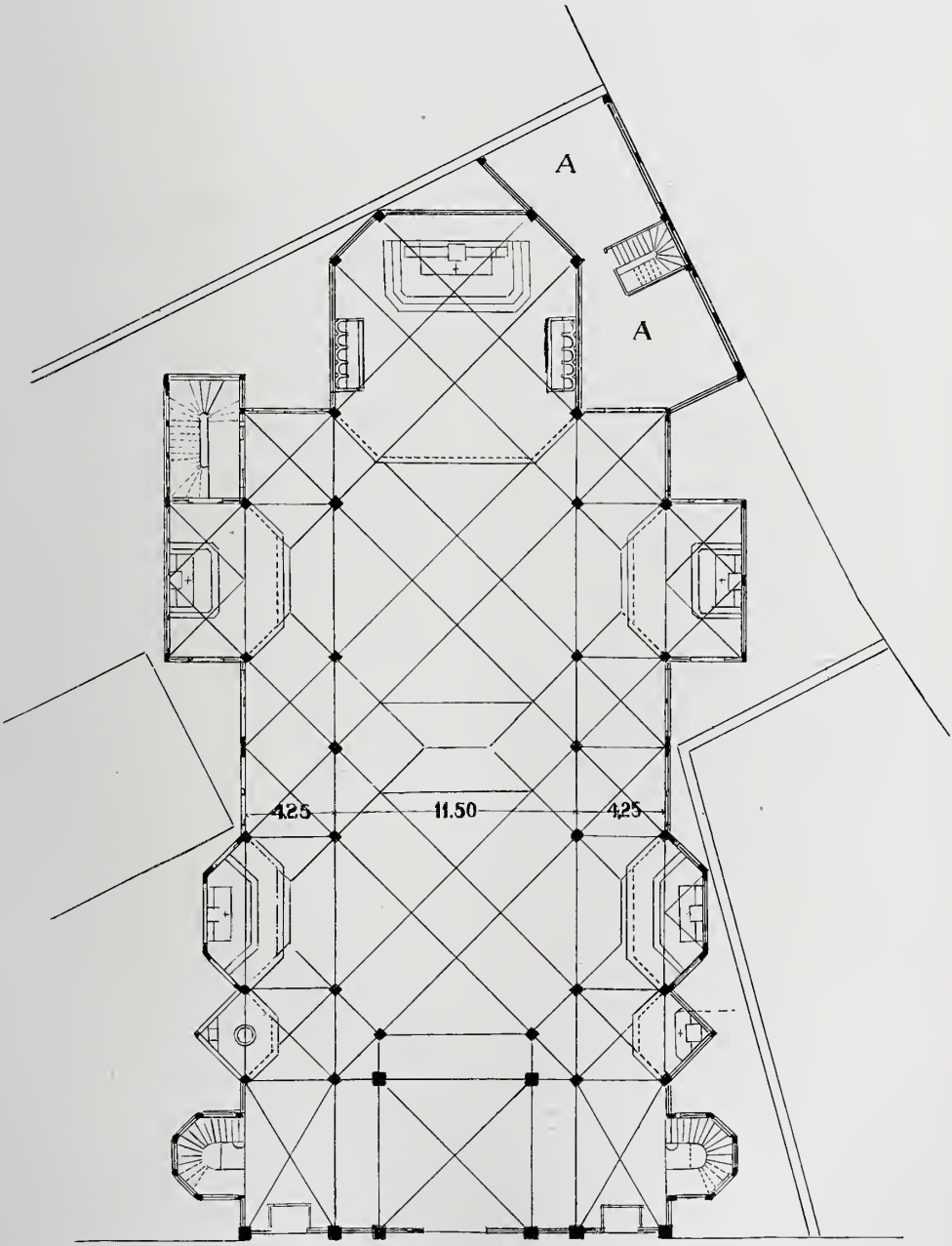


FIG. 1.—PLAN OF THE CHURCH.

St. Jean de Montmartre. M. de Baudot, Architect.

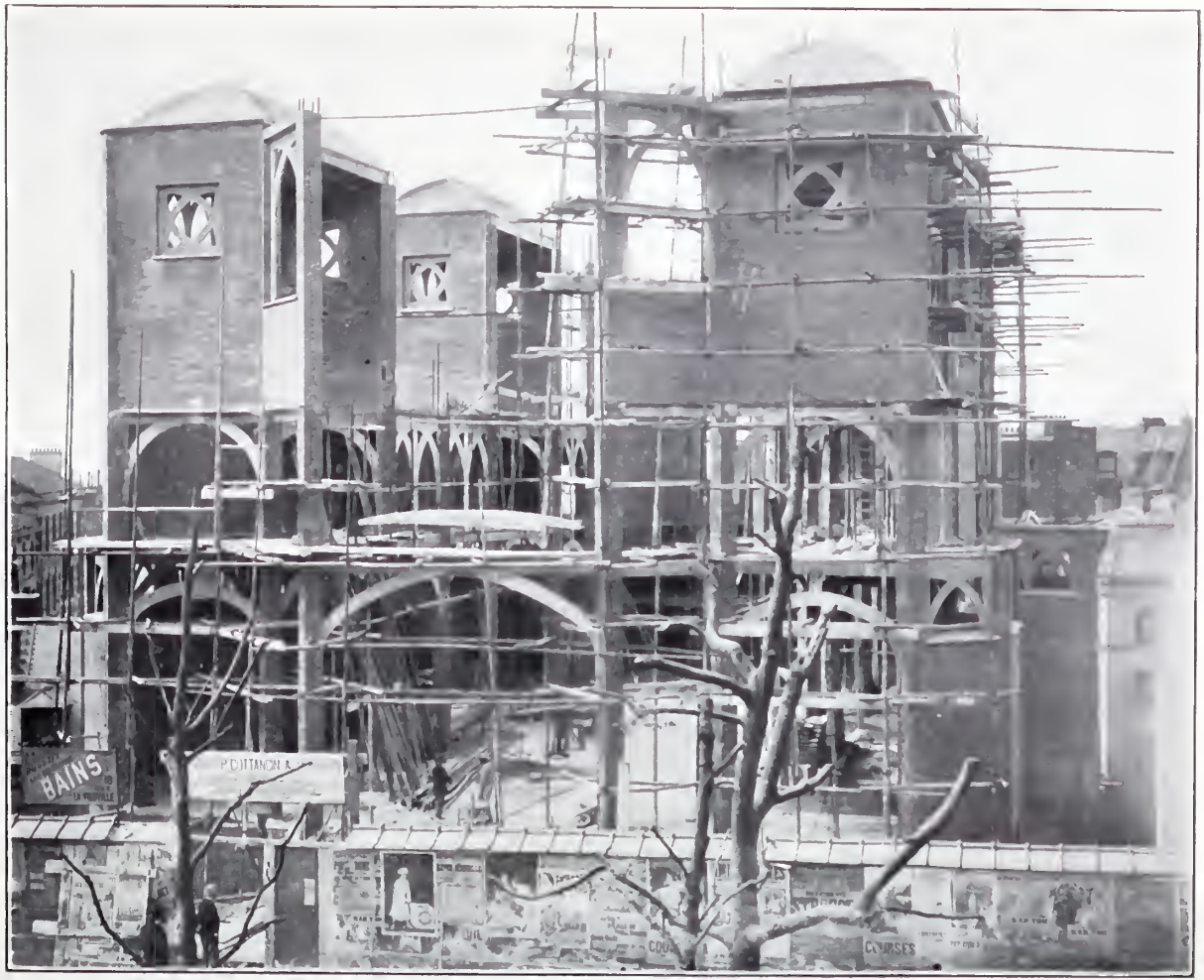


FIG. 2.—ENTRANCE TO THE UPPER CHURCH.

St. Jean de Montmartre, in the Course of Construction. M. de Baudot, Architect.

FIG. 3.—ROOF AND VAULT IN COURSE OF CONSTRUCTION.

St. Jean de Montmartre. M. de Baudot, Architect.

Then you bury the steel under a layer of stucco, which you afterwards give the appearance of marble. But it is not the stucco which bears the weight, it is the slender pillar of steel. Now it is against the use of sham materials, against architecture in imitation of stage scenery, that I protest. My pillars alarm you, but they would not have alarmed you if I had surrounded them with useless stone, as was done in the case of the Eglise de la Trinité. Permit me, therefore, to keep them as they are." Thus spoke M. de Baudot.

He showed the same logical spirit in regard to his walls. They rear themselves in bold nakedness. They have no courses with granite rustic-work, no moulding, no cornices, and no platbands. Externally, they appear as they should appear according to their composition, and, thanks to this severely logical treatment, they produce a strong impression. The eye sees with astonishment the apsis wall rising to a height of 30 meters without a single projection, a single flying buttress, a single pier, or in fact any of that mass of materials hitherto considered necessary.

We have given a great many illustrations as the subject is quite new, and architects and builders will take an interest in every detail of an edifice which has been so carefully thought out in all its parts.

Fig. 2 shows the entrance to the upper church in course of construction. One sees distinctly the piers and the network of wires ready to serve for forming and sustaining the roof.

In Fig. 3 we have a fine view of the roofing, showing what an enormous economy is effected by employing this process. Here the cement is "armed" with a wire trellis which forms the covering of the edifice. The vault is supported by compact bands of wire and cement which are attached to the wires belonging to the pillars. The whole fabric is thus made thoroughly strong and firm. The economy effected is remarkable. There is no wooden framework and no covering; a vault on centerings 5 centimeters thick forms at once the ceiling and the roof of the church. The vault is double, the space of a few centimeters between the two vaults being filled with an insulating substance. Truly M. de Baudot has turned his material to good account, and has not used it to reproduce the familiar arrangements which have been necessary owing to the employment of other materials.

In the background of this photograph we can see the immense Church of the Sacred Heart, which was erected by national subscription after the disastrous war of 1870, at a cost which has already reached $6,000,000, but which has not even saved the cause of sound architecture.

The view of one of the sides given in Fig. 4 shows the scheme

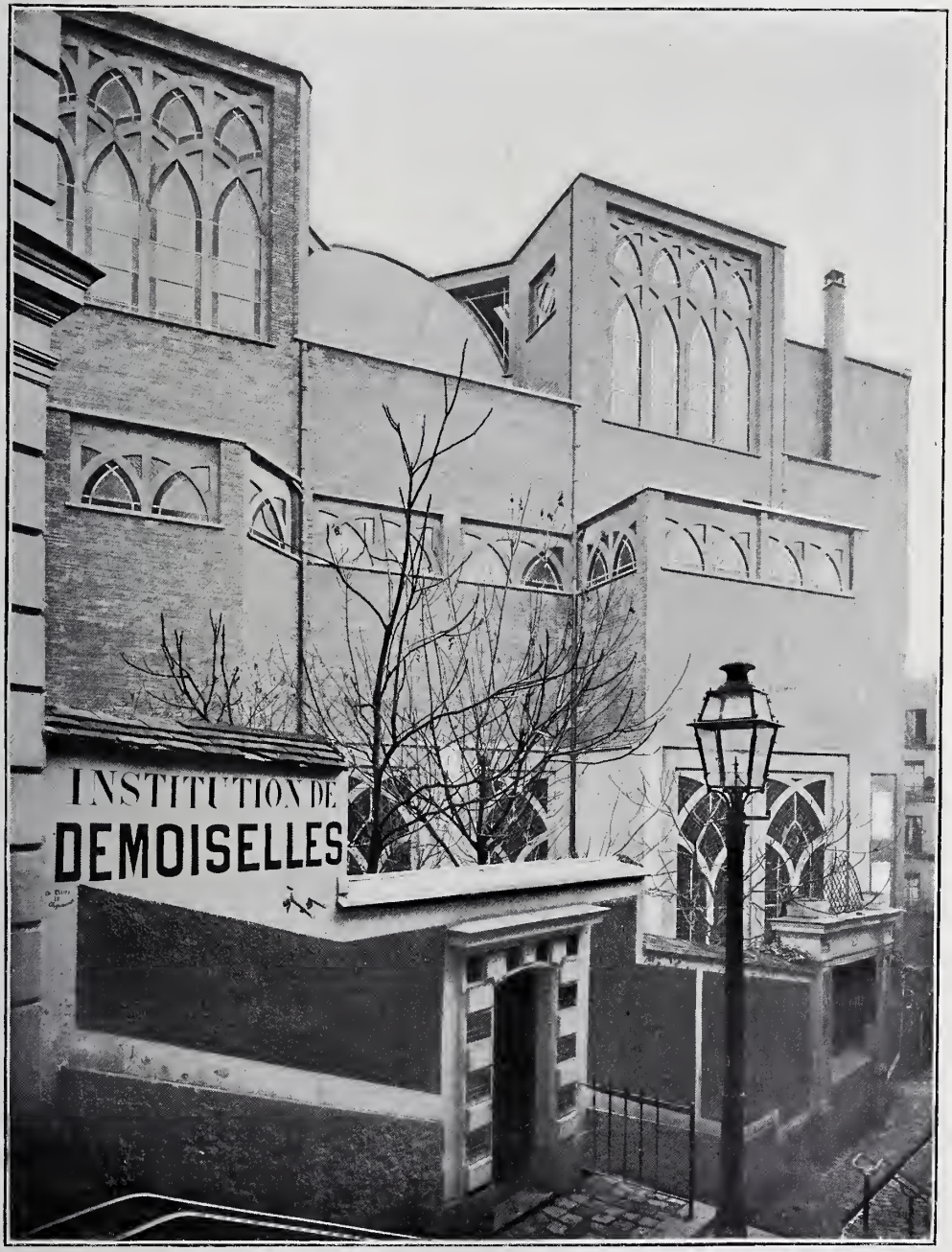


FIG. 4.—ONE OF THE SIDES OF THE CHURCH.
Showing the Scheme of Construction Adopted.
St. Jean de Montmartre. M. de Baudot, Architect.

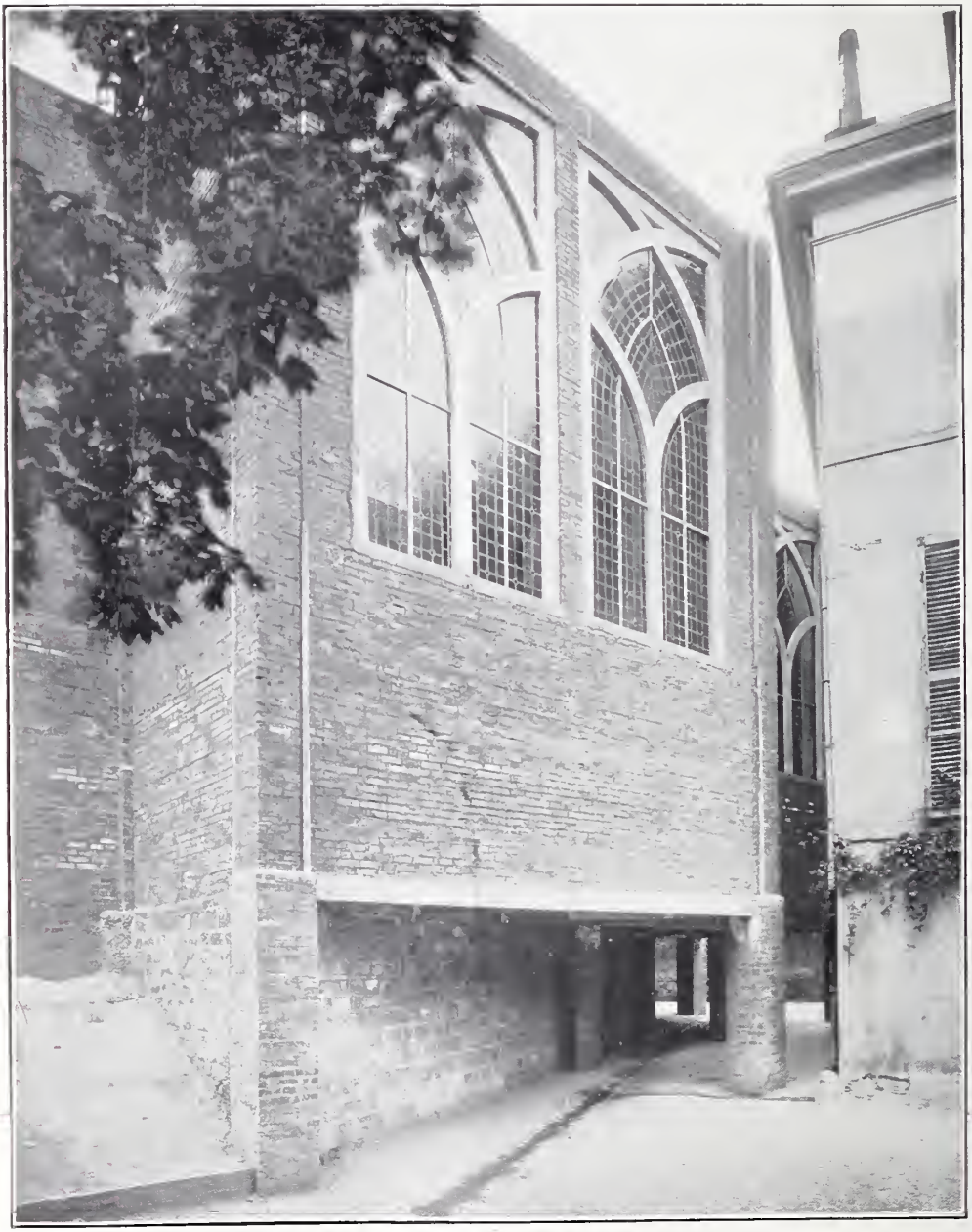


FIG. 5.—DETAIL OF ONE OF THE BAYS.

The Lower Church of St. Jean de Montmartre. M. de Baudot, Architect.

FIG. 6.—INTERIOR OF THE LOWER CHURCH
St. Jean de Montmartre. M. de Baudot, Architect.

of construction adopted. With *brique armée*, the different parts of the wall being all dependent one upon another, and forming a whole over which the pressures and strains are equally distributed, it becomes possible to have enormous openings. Note, for instance, the large windows of the lower church, which are visible in this photograph. It will be remarked that there is nothing arbitrary about the shape of the mullions, which are also made of *ciment armé* and form, by means of the wires traversing them, an intimate part of the edifice. Above, the aculus in the lateral chapels, together with the different openings at the top, let in a flood of light.

Fig. 5 represents a detail of one of the large bays of the lower church, and shows the bond in a very clear manner. We will mention by the way that the brick employed here is common perforated brick; but there would be nothing to prevent the use of a richer brick. We shall revert to this point in connection with the decoration.

The next view (Fig. 6) is that of the interior of the lower church. The architect, true to his excellent principles, has left the pillars in all their nakedness. For his ceiling, the floor of the upper church, he has drawn a decorative motive from his building materials themselves. Just that, and it is sufficient. These slender pillars, these strips of *ciment armé* and this 5-centimeter floor support the upper church, to the weight of which was added, during the building operations, that of a veritable forest of beams and planks for the scaffolding.

We come at last to the upper church (Figs. 7 and 8), which is still unfinished. But the practised eye sees at once how intelligent is the arrangement. Thanks to the slenderness of the pillars the aisles are spacious and the worshippers can move along them with ease. The vaults, happily and originally conceived, present themselves as what they are, and arches in *ciment armé* have, even at this early stage of their career, taken rank as being effective in a decorative sense. Light enters everywhere; there is not a single dark corner; the openings in the vault have their proper form.

As to the façade, notwithstanding the fact that the architect only had a limited amount of money at his disposal, use has been made of sharp-fire enameled brick, that splendid material which is assuredly destined to play an important part in the architecture of the future. The enameled bricks employed by M. de Baudot, however, are not something put on as a decorative addition, but are built into the edifice and form an integral part thereof, taking the place of ordinary bricks. I lay stress upon this point as it is essential to a thorough comprehension of M. de Baudot's excellent ideas. He does away with the deceptive veneering, the sets of dominos in

FIG. 7.—INTERIOR OF THE UPPER CHURCH.
St. Jean de Montmartre. M. de Baudot, Architect.

FIG. 8.—INTERIOR OF THE UPPER CHURCH.

St. Jean de Montmartre. M. de Baudot, Architect.

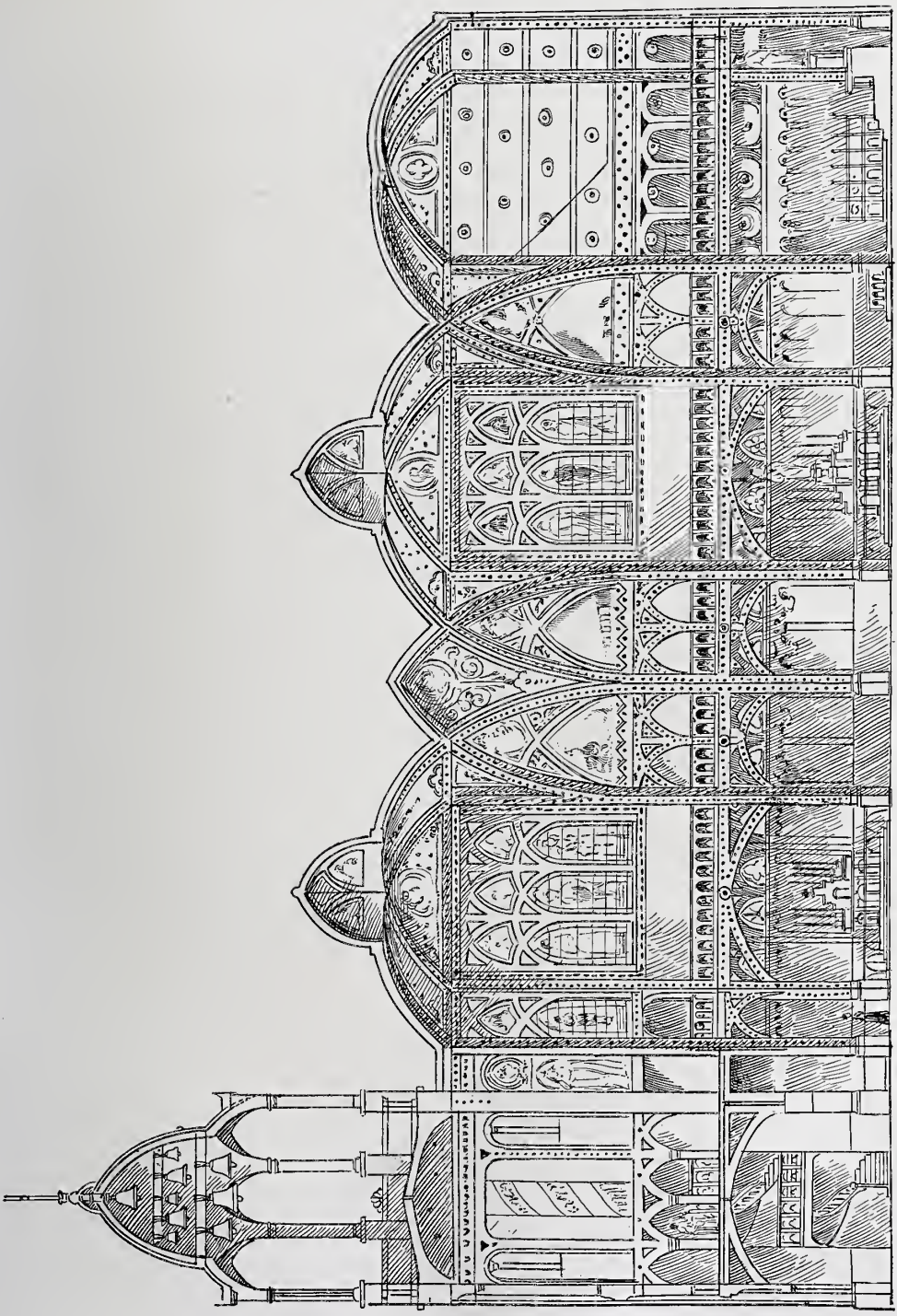


FIG. 9.—LONGITUDINAL SECTION.

The Church of St. Jean de Montmartre. M. de Baudot, Architect.

FIG. 10.—PERSPECTIVE VIEW.
The Church of St. Jean de Montmartre. M. de Baudot, Architect.

marble and so forth, a kind of decoration of which the Gothic cathedral of Florence affords the best known and at the same time the most deplorable example.

The views of the interior show how M. de Baudot conceives the decoration of an edifice built of *brique armée*. As can be seen by the longitudinal section (Fig. 9), in the detail and in the prospective view (Fig. 10), the scheme of construction, the necessary shape of the vaults, arches, supports, their crossings, their development, produce of themselves a decorative effect which is manifestly inseparable from the building itself, that is, essential to the structure which they constitute. Such was the case in former days with the Gothic vaults, arches, ribs and columns, and it should always be so.

Finally, it is evident that in a church which is pierced with immense windows, as this one is, these windows provide for the glass-staining art a field of which it stands in need. There is an opportunity here for a revival of one of the most admirable of the arts of the past, an art in which the United States, by reason of the interesting work of Louis Tiffany, has taken in our day the foremost place. For the walls, painted decoration finds scope: archivaults, medallions, lunettes, etc., are calling for a painter of sacred subjects who shall bear witness on the walls of a church to the eternal nature of that faith which, in the thirteenth and fifteenth centuries, inspired the works of such men as Giotto and Fra Angelico.

Such is the Church of Saint Jean of Montmartre. I can picture to myself the smiles of our elegant architects, for whom the Louis XV. and Louis XVI. have no secrets, and who know so well how to disguise their poverty of ideas beneath a profusion of decoration apparently of their own creation, but in reality, filched from collections of examples of the works of their predecessors, I can see their smiles and hear their disdainful remarks as they stand before the walls of this Church of Montmartre. But I hold that, for the man who is capable of studying a plan, of understanding the unfolding of a system of construction, or reflecting upon the architectural use of given materials, of appreciating sequence of ideas and bold, inflexible logic in design, this church in *brique armée*, entirely bare as it may be, and however strange it may appear at first sight, is an excellent lesson in sound, healthy architecture. We do not get such lessons every day, and those who are wise will profit by this one.

Jean Schopfer.

FIG. 24.—A HOTEL AT WEST BADEN, IND.
All the floors are reenforced concrete. The walls are of brick.

REËNFORCED CONCRETE CONSTRUCTION.

American Methods.

WHENEVER any new material or any old material in a new or improved form is offered for use in building, there are certain preliminary questions relating to cost, both comparative and absolute, the peculiarities of action when subject to fire, weather and loads, limitations of use, etc., which must be answered satisfactorily before any detailed investigation is made. These investigations concerning reënforced concrete have been made by a number of engineers and have been answered in the most satisfactory manner, so we can, with propriety, consider them in conjunction with a general description and discussion of the uses and advantages of this material, that is, of concrete in which steel is so embedded as to reënforce the tensile strength of the concrete.

In general it may be said that the reënforcing of concrete by means of steel is neither new nor of American origin. The improvement in recent years has been, first, to secure steel in such forms that it can be easily embedded in the concrete in the location required for effective work, and, second, to make the concrete of materials which are inexpensive both in first cost and in handling, and can be easily brought into intimate contact with the steel.

The factors in these two elements have been the improvement in the brands of American Portland Cement and the decrease in cost thereof. The use of cinders as an aggregate instead of stone and the use of various patented forms of metal, but notably expanded metal. These changes have permitted a competition with better known forms of fireproof construction so keen that the cost of all forms of fireproof construction has materially decreased per square foot of floor area, at the same time that the labor cost has increased.

In all work done in America it is imperative that either the very cheapest form of labor shall be employed or else that intelligent labor shall be so used as to do very much more in units of work performed than is expected of European labor of any grade. In the development of this form of construction American practice differs widely from European practice, and while American applications have not been quite as bold as some of the European applications, they are, in the writer's judgment, far in advance in the line of better engineering and more general in useful application.

As an engineering proposition it is unquestionably better to design so that slight imperfections shall not be fatal to the stability of the structure. For this reason but few American engineers would design bridges along the lines followed by quite a number

of European engineers, who make the thickness at the crown of the arch so slight that even a bucket of imperfect material would endanger the structure.

Speaking broadly, reënforced concrete is concrete with steel strands of small cross-section, so disposed therein as to occupy the position of the extreme fibre on the tension side of the beam or slab, when exposed to external loading. Popularly this may be illustrated in Figures 1 and 2, in which the shaded portion represents the area in tension. Enough steel is embedded in the concrete at the outside of the shaded portion to give the necessary cohesion. Concrete alone possesses very considerable compressive strength,

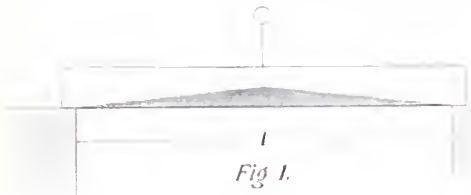


Fig 1.

Fig 2.

but when loaded in the manner in which a beam is ordinarily loaded, it fails through breaking on the tension side, and fails with a very slight deflection, the beam of concrete carrying a certain load, but collapsing the instant the load reaches the limit of the carrying capacity of the beam. Concrete beams with steel reënforcement, on

FIG. 4.—BRIDGE, GOLDEN GATE PARK.
Built of reënforced concrete.

the other hand, begin to deflect when the load reaches a certain amount; when the deflection becomes pronounced slight cracks appear in the concrete on the tension side, which gradually widen, the deflection increasing, until finally no more load can be added,

FIG. 5.—FACTORY BUILDING, ERECTED IN 1891.

FIG. 7.—GIRLS' DORMITORY AT PALO ALTO, CAL.
Erected in 90 days of reënforced concrete.

and the beam will gradually sink, tearing the steel apart, if the load be sufficient and the beam be properly proportioned.

In the case of the concrete without steel, the action of the concrete is the same as the action of stone. In the case of the concrete with steel, the action is very similar to that of a steel beam, the ratio of deflection to load being uniform until the elastic limit is passed, when a marked increase in the deflection occurs, after which the ratio of deflection to load is again uniform, until rupture occurs.

FIG. 6.—INTERIOR OF A FACTORY.
The actual floor loads of this building range from 200 to 2,000 lbs. per square foot.

The amount of deflection of a concrete steel beam under a load is slightly less than that of a steel beam of the same depth under a load causing a proportionate fibre stress; this is not absolutely accurate, but is sufficiently so for practical purposes.

The elasticity of properly designed slabs is very great, their performance being quite similar to that of steel sheets. In one of the writer's experiments a slab 20 feet by 23 feet, 6 inches thick, was supported on posts 13 feet apart in one direction and 16 feet apart in the other direction, 4 posts only being used. It was loaded with 66,000 lbs., then six men, whose aggregate weight was over 900

lbs., jumped simultaneously up and down on the concrete, causing a deflection of about $\frac{5}{8}$ of an inch at the instant of impact, but producing no apparent permanent effect on the slab.

Reënforced concrete may be used for walls and columns.

Many of the illustrations show buildings made with concrete walls. The writer is of the opinion, however, that they are not as economical nor as desirable as the usual brick or stone construction. This is not because they cannot be made just as durable, but because of the expense and anxiety incident to securing these results. The form of curtain walls construction shown in Figure 28 illustrates the system employed by the writer in many of his shops erected where there was a treacherous sub-soil and the probability of an unequal settlement. It is an excellent form for

FIG. 8.—BRIDGE ON EVERGREEN ROAD, NEAR PITTSBURGH, PA.
Span 28' 0"; Width 20' 0"; Test 12-Ton Roller.

FIG. 9.—CENTERING FOR A BRIDGE.
Situated on Evergreen Road, near Pittsburgh, Pa.

factory construction, because it is a poor conductor of heat, is watertight, durable and inexpensive. Its field of usefulness, however, is practically limited to the cheapest form of building.

The great advantage of the use of reënforced concrete for all floor constructions, arises from the fact that the entire floor may be constructed as one mass, using the principle outlined in Figure 2, which, in accordance with well-known engineering formula, permits of the desired strength being obtained with less thickness than would be necessary in the event of the floor being composed of isolated pieces, non-continuous at the points of support.

In general, the depth required is determined by the deflection requirements, it being usually necessary to limit the deflection to an amount which will prevent plaster from cracking, which is taken at 1-30 of an inch per foot of span. The relative deflections for the two conditions of loading and support shown in Figures 1 and

2, are as 1 to 5. The deflection in the portion marked L in Figure 2 for the same load being 1-5 of the deflection of the part marked L in Figure 1, and the strength of the part marked L in Figure 2 for the same depth of slab and amount of metal being three times the strength of the part marked L in Figure 1 in the center and $1\frac{1}{2}$ times the strength over the points of support.

When it is considered that instead of making isolated beams it is practicable to make a slab in which the strength radiates in all directions from the point of support, the enormous strength shown by tests of floor construction actually made does not appear so very remarkable, but without this understanding of the subject it would appear incredible. The application of this system to a building may be seen in the figures illustrating the store house for the Central Railroad Company of New Jersey, at Elizabethport, Figures 41 and 42, which is built entirely of concrete, the floor slabs being respectively 12 and 6 inches in thickness.

An interesting test may be made, if desired, by procuring a piece of thick cardboard 10 inches square and supported on four spools placed four inches apart; if an ordinary electric push button with bell attached be placed underneath so as to ring when the deflection reaches $\frac{1}{4}$ of an inch, first apply a load by means of a stick in the center, and then put a load around the edge equal to a total of twice the load which was applied in the center, and apply a load again in the center, it will be found that about four times the amount of the

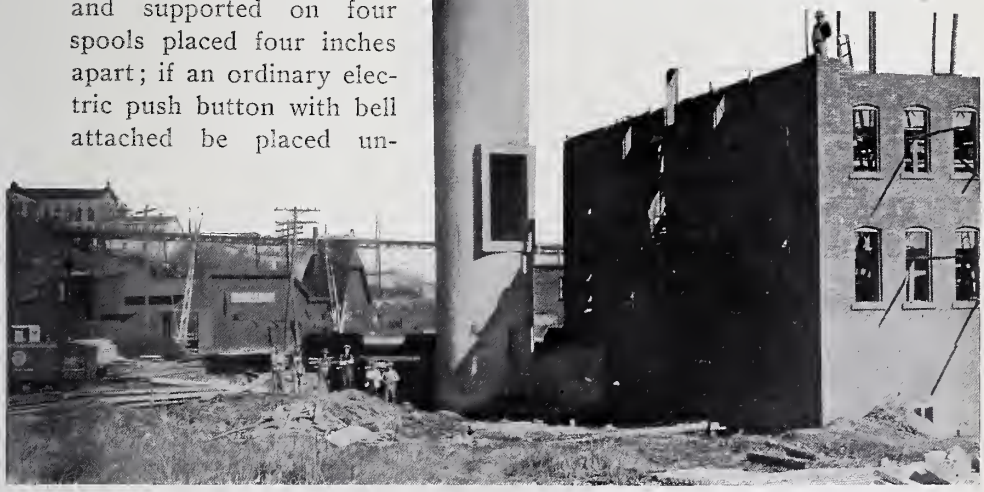


FIG. 10.—CHIMNEY CONSTRUCTED OF REËNFORCED CONCRETE.
No outside scaffolding was used.

FIG. 11.—NASSAU COUNTY COURT HOUSE—FRONT VIEW.

FIG. 12.—INTERIOR OF NASSAU COUNTY COURT HOUSE.

FIG. 13.—INTERIOR OF NASSAU COUNTY COURT HOUSE.
On the elliptical arch shown the ornamental panelling is applied directly to the ribs carrying the load.

FIG. 14.—CONDUIT COVERING MADE OF REENFORCED CONCRETE.

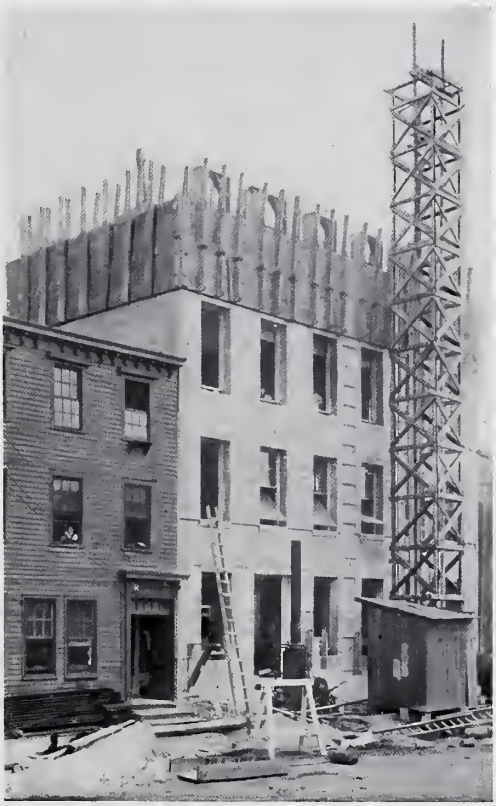


FIG. 15.—THE FORM OF CENTERING USED IN MAKING CONCRETE WALLS.

initial load must be applied to the center before the deflection will again reach a $\frac{1}{4}$ of an inch; a still larger piece may be employed with other points of support placed 6 inches apart and the load placed at the centers of the flat bays. The writer has made such experiments with a piece of celluloid 1-16 of an inch thick which carried at the beginning 18 lbs., and with 40 lbs. distributed around the edges carried 74 lbs. in the center (Fig. 3).

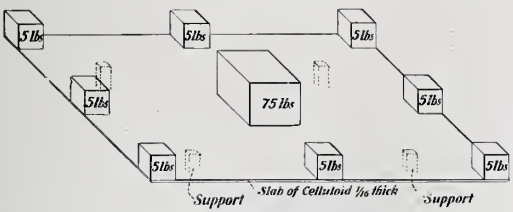


Fig 3.

Floor slabs may be made for ordinary use up to 15 feet span and 6 inches thickness, perfectly flat on both the top and the bottom, the top being surfaced just before setting and the bottom being plastered, if desired, after the centers are removed, adding not more than $\frac{3}{8}$ of an inch to the thickness of the slab. For spans greater

than 15 feet or when the load is such as to require a thickness greater than 8 inches, the writer has made a practice of securing the necessary stiffness by means of reënforced concrete girders projecting below the floor slab, as is illustrated in the photographs of the interior of the shops at Dunmore. (Figs. 43 and 44.)

For American conditions it is desirable that the steel should be of such a form that it can be very easily applied, inexpensively purchased, and procured almost anywhere. For this purpose round rods are the best for large sections, though they should not exceed one square inch in area, more than one rod being used where a greater sectional area is necessary. The rods are kept in position by putting a right angle bend in the ends, or by slightly kinking them with a kink shaped like the letter V, and also by the adhesion of the concrete to the steel. The twisted rods of the Ransom system give a very efficient form, as they do not require any form of anchoring;

FIG. 16.—TEST SECTION OF REËNFORCED CONCRETE.

The water conduit, which was 8 ft. 9 ins. wide, 8 ft. 9 ins. high, 5 ins. thick at the top, and 8 ins. thick at the bottom, was loaded with 25 tons of steel rails. The deflection was 7-16 of an inch; 7½ miles constructed.

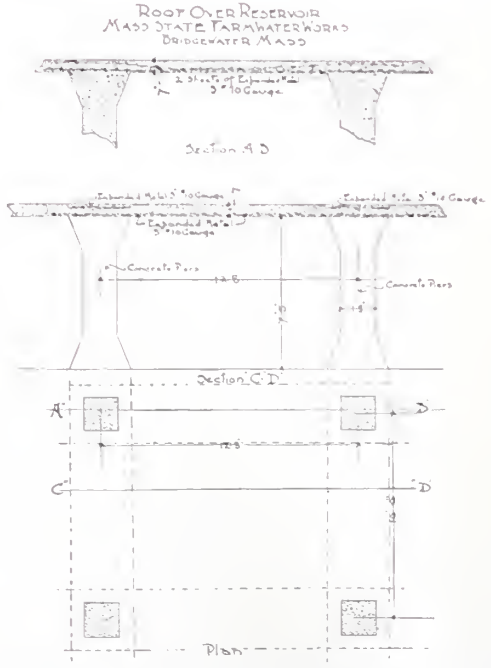


FIG. 17.—SECTION OF RESERVOIR ROOF.

FIG. 18.—THE BEHAVIOR OF UNPROTECTED STEEL IN FIRE.

FIG. 19.—CONSTRUCTION OF A WHEEL PIT. This pit was situated at Walpole, Mass., and was 15 feet in diameter.

the steel in this form should be employed in the top of the slabs, underside of girders, for the formation of lintels and for tieing walls or parts thereof together, and if concrete columns are used, in the exterior of the columns disposed vertically. The writer

FIG. 21.—CONSTRUCTION VIEW OF THE WHEEL PIT.
Showing the flume deck and the centering for the wheel pit.

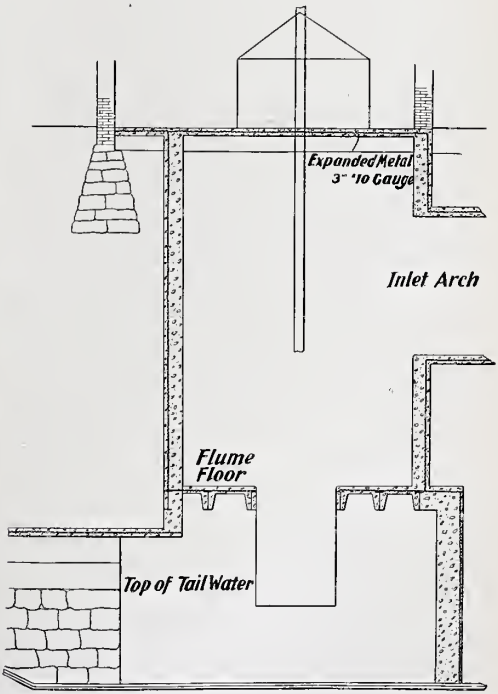


FIG. 20.—GENERAL VIEW OF THE WHEEL PIT.

FIG. 23.—AN AWFUL EXAMPLE.

A building made with terra cotta blocks and structural steel, supposed to be fireproof, and used as a pattern-shop, practically destroyed by fire.

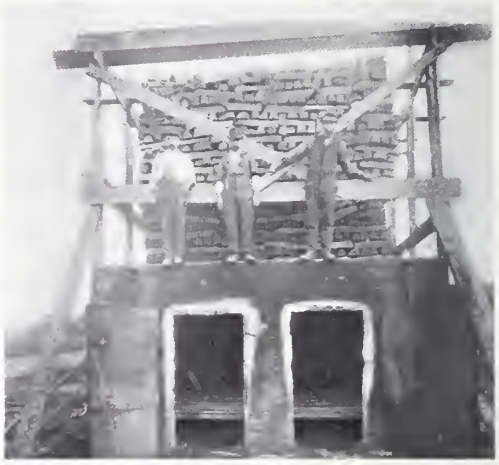


FIG. 22.—FIRE TEST OF CINDER CONCRETE.

The floor shown carried a uniformly distributed load of pig-iron of 1,000 lbs. per foot. When loaded 400 lbs. per square foot, it was subject to fire on the underside, the temperature being between 600 and 1,000 degrees C. for three hours, during which time the deflection increased from 0 to 0.8 inches. The temperature of the I-beams, which were surrounded with cinder concrete during this time, did not rise above 120 degrees C. The strength of the slab was practically unimpaired.

has used steel wire cables in the construction of cistern walls, laying the cables in the concrete composing the walls in a spiral form going round and round the cistern, lapping the ends about 4 feet to secure the necessary tie. Rods may also be advantageously used in footings, as illustrated in Fig. 34. The special form of rolled steel shapes used in some systems of reënforced concrete are, in the writer's judgment, objectionable, since they are much more expensive per pound than the rods and have the disadvantage of requiring too much care in the setting, and a lack of concentration of the area of the steel at the point where it can

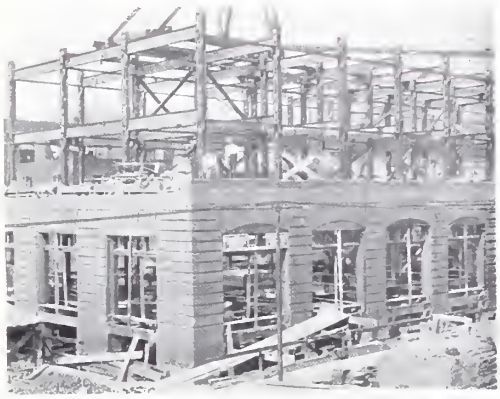


FIG. 26.—THE EFFECT OF CONCRETE CONSTRUCTION ON STEEL FRAMES.

Framing for a steel skeleton building with all the beams and girders in place, showing the reduction in steel effected by this form of construction.

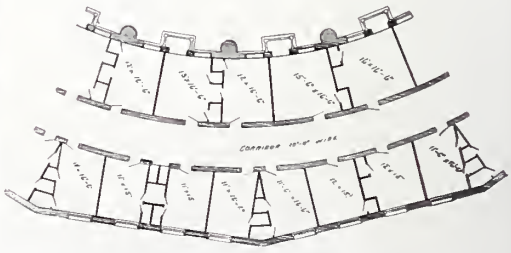


FIG. 25.—FLOOR PLAN OF HOTEL AT WEST BADEN SPRINGS, IND.

All floors of reenforced concrete.

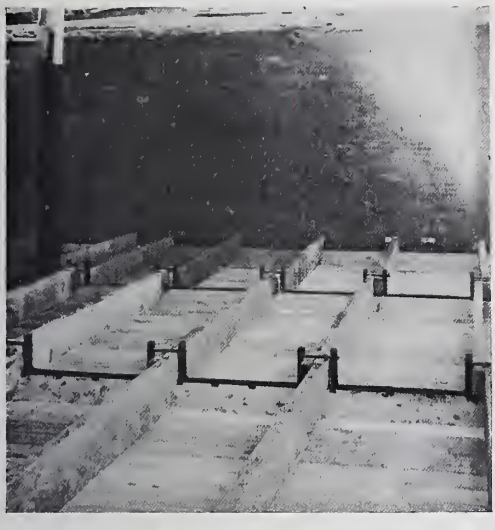


FIG. 27.—CENTERING FOR A STEEL FRAME BUILDING WITH REËNFORCED CONCRETE FLOORS.

FIG. 30.—FLOOR FOR THE SUPPORT OF GRAIN BINS.
These floors were actually loaded to 4,500 lbs. per square foot.

do the most good. This is particularly the case when the steel shapes are nearly as deep as the concrete which is needed to surround them.

There are various forms of steel mesh, of which perhaps the best known is expanded metal, which have been advantageously used. Practical and commercial considerations have led the writer in his practice to the use of expanded metal whenever steel is required in the bottom of a floor slab, and to the use of rods whenever metal is required in the top of a slab. In general it may be said that for steel in the bottom of a slab, No. 4 expanded metal is as heavy as should be employed, but in all cases the concrete must entirely cover the steel.

FIG. 29.—TANKS FOR PAPER PULP.

FIG. 28.—FRAMING FOR FACTORY SIDE WALLS.

FIG. 31.—THE FLOOR SHOWN IN FIG. 30 IN PROCESS OF CONSTRUCTION.

On the right it is partially completed. The circular tubes are for the discharge pipes from the bins.

FIG. 32.—UNDERSIDE OF THE COMPLETED FLOOR SUPPORTING THE BINS.

Shown in Fig. 30.

The formula to be employed in the computations of strength have been the subject of investigation both in this country and abroad, and many a beautifully intricate formula has been deduced; unfortunately, the knowledge of the properties of the various kinds of concrete has not reached a point where the constants for use in this formula have been determined with reasonable accuracy, and the writer therefore uses a simple formula of his own, which in conjunction with the large number of experimental results which he has, enables him to properly design the structure. Similar empirical formula are in use by other practical workers.

In all cases the cement used cannot be ground too fine, and should be a high grade Portland cement ground very fine. It

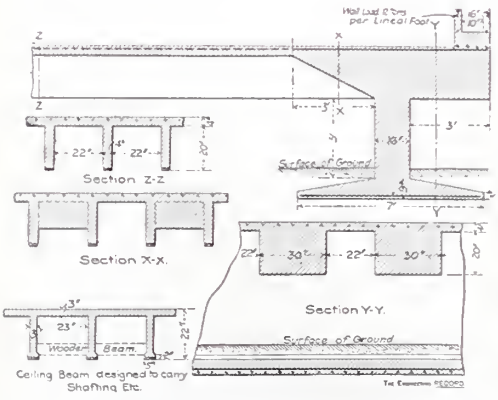


FIG. 33.—CANTILEVER SUPPORT FOR FACTORY WALL ON SOFT GROUND.

A wide spread was required for the footing.

FIG. 34.—CONCRETE WALLS FOR BLACKSMITH SHOP.

This shop belongs to the Jersey Central R. R., and is situated at Elizabeth.

should be so proportioned and burned that the initial set will take place in not less than 15 minutes. A sufficient specification for the cement is that it should be a Portland cement ground so that there will be a residue of not to exceed 5% on a No. 200 seive, that it lose not more than 5% when heated red hot, and weigh 95 lbs. to the bag. The high grade American Portand cements will comply with this specification and will be entirely satisfactory.

Concrete may be made, using any hard angular material such as broken stone, for the aggregate, but of late years it has been found that an excellent concrete unaffected by fire, of good strength, light weight, and small expense can be made by using the cinders from ordinary hard coal furnaces for the aggregate. They do not require any treatment except the breakage of the large lumps with a shovel. The writer has used furnace cinders entirely without screening with most satisfactory results. It must be ad-

FIG. 35.—OIL HOUSE.
Situated at the Elizabethport Works of the C. R. R. of N. J. Tanks holding 70,000 gallons of oil are in the basement.

FIG. 36.—THE POWER HOUSE.
Situated at the Elizabethport Works of the C. R. R. of New Jersey.

mitted that to the ordinary engineer, accustomed to the use of broken stone, the use of cinders appears the height of tolly, as the material seems to be absolutely unsuited to give satisfactory results, but several years of experience and of repeated tests have confirmed the writer in his present practice of using cinders in all cases, except where weight was a desirable factor. When cinders are used they should be mixed with sand and cement. To determine the amount the writer fills a receptacle with cinders well shaken down, then fills up the receptacle with water, using the volume of water increased by 10% to determine the volume of sand required, and to similarly fill a receptacle with dry sand well shaken down, and to use the amount of water required to fill the voids, increased by 15% as the amount of cement required. To mix a batch of concrete a dry board platform is required, on which a measure is made by nailing four boards together in the form of the sides of a box, which will hold the amount of cinders, which

FIG. 37.—INTERIOR VIEW OF THE ENGINE ROOM.

Situated at the Elizabethport works of the Jersey Central R. R. Floor, a flat slab of reenforced concrete 12 inches thick. Roof of reenforced concrete 6 inches thick. No structural metal used, except small expanded metal rods 1 inch diameter, and the cast-iron columns shown.

FIG. 40.—POWER HOUSE.

Situated at the Elizabethport works of the C. R. R. of N. J. It stands on piers without any cellar. Flat floors and ceilings. Load about 400 lbs. per sq. ft. First floor 12 inches thick. Second floor and roof 6 inches thick. Expanded metal in the slabs.

should be mixed with one barrel of cement, then the cinders are filled in this box and leveled off. On top of this the required amount of sand is spread, and then the cement spread on top of the sand; the box is then moved. If a mixer is used, the workmen shovel from the bottom into the mixer, taking a small portion of cinders, sand and cement in each shovelful; if a mixer is not used, they shovel from the bottom into a new location, turning the cement through as it is turned over. The mass is then shoveled into a mound, raked down, water added and turned over into another mound, from which it is shoveled into wheel-barrows.

FIG. 38. INTERIOR VIEW OF ENGINE ROOM OF C. R. R. WORKS AT ELIZABETHPORT.

FIG. 39.—INTERIOR OF THE BOILER ROOM. Situated at the Elizabethport works of C. R. R. of N. J.

FIG. 41.—INTERIOR VIEW OF THE POWER HOUSE SHOWN IN FIG. 40.

Enough water should be added to make the concrete decidedly mushy; this will depend on the dryness of the sand and cinders and to a certain extent on the season of the year, more water being required in summer than in winter. The concrete when deposited should be puddled in place and should be soft enough to permit a man sinking to his ankle when stepping on a fresh bed of it. If the mixing is done in winter time, injurious effects by freezing may be avoided by the use of one quart of rock salt to each 20 to 30 gallons of water. If the concrete is put in place in summer time it should be prevented from drying by sprinkling as often as may be necessary.

Stone concrete may be made by using any broken stone or gravel, taking care that the particles are in all cases of random

FIG. 42.—GENERAL VIEW OF THE BIG PLANT.
These shops were built for the Wyoming division of the Erie R. R. All of concrete except the roof of the high building.

sizes, ranging from $\frac{1}{4}$ of an inch up to 1½ inch, the proportions of sand and cement to be determined in the same way as that already described for the cinders. Stone concrete should be mixed in the same way as the cinder concrete, but should be turned over once or twice more. It should be mixed a little less wet than the cinders and will require a little ramming.

In regard to the use of concrete mixing machines, there are special

cases where they can be used to good advantage. Each case must, however, be considered on its own merits. A good concrete mixing gang ought to use 1⅓ bags of cement for each hour's labor put in by the men, including therein the time of the shovelers, unloading gang, waterman and gang boss.

Forms must be employed for holding the concrete; these forms for ordinary factory construction may be rough hemlock, 2 inches thick, and can be used over and over again without cutting. Otherwise ⅞-inch boards, mill dressed on one side, 2 inches by 4 inches studding placed 2 feet apart on centers, may be used. For a better grade of work 1¼-inch short leaf yellow pine, mill dressed and ship

FIG. 43.—INTERIOR OF CAR REPAIR SHOP. Part of the plant of the Wyoming Division of the Erie Road.

FIG. 44.—CONCRETE RAILWAY STATION. Situated at Bloomingburgh, N. Y., Ontario & Western R. R.

lapped, should be employed. Wherever forms are to be used great care should be taken to frame them solidly, but only of such size as can be conveniently handled by not more than six men. On walls special forms, as shown in Fig. 15, may be employed. It must be borne in mind that in all cases the soft wood swells somewhat, and forms therefore in the nature of boxes must be made with the sides inclining towards each other so as to be easily withdrawn; where a smooth surface is desired the forms should be painted with a solution of soft soap applied just before the concrete is deposited. The writer has tried a number of different kinds of building paper to obtain a smooth surface, but without success. The construction photographs illustrate a number of different methods of building the forms.

The fireproof qualities of Portland cement concrete are very good; this is particularly true of cinder concrete, which is a very poor conductor of heat. (See Fig. 22.) The concrete is not changed in character by fire, and will not crack or shell off. The strength of the reënforced construction is but very slightly effected

by the heat. No better form of fireproofing is known to the writer than a cinder concrete held in place by steel.

When the construction is properly made there is practically no deterioration, the concrete absolutely preserving the metal from rusting, as a long course of observation proves.

The technical journals have published many tests of reënforced concrete showing the phenomenal carrying capacity heretofore mentioned. A detailed review of these tests would hardly be appropriate in an article of this character. The writer has also made a

FIG. 45.—EXTERIOR OF PACIFIC COAST BORAX FACTORY, AT BAYONNE, N. J.

Woodwork burned up. Motors and panel boards melted down in many cases. Heavy tanks dropped on floors. Structural part injured about 1%.

great many tests indicating the same result; in one case a load of 140,000 lbs. was carried on four square feet applied in the center of a reënforced arch of 5 feet span without injury.

The best results in the use of reënforced concrete are always to be looked for when the material is used to resist the application of loads producing cross bending in the piece. There are some few systems in which the resulting construction is of arch form; in all of these the writer considers that the material has been improperly applied since tie rods are necessary to take up the thrust of the arch. These systems are further objectionable by reason of the fact that the ceilings in buildings should always be flat, requiring special treatment and adding load to no good purpose.

There are systems in use in which metal does not truly reënforce the concrete, but is simply used as a convenient and inexpensive form of centering. In some of the foreign systems the practice has been adopted of moulding the girders in advance of the floor construction, thereby introducing joints which are objectionable, since advantage is not taken of the continuity of which mention has al-

ready been made. Another objection to some American systems and to some of the foreign systems lies in the peculiar form of the rods, which are so shaped as to make it impossible for the metal all to act equally in tension, the fundamental principle being that the sectional area of the rods as compared with the area of the concrete should be such that the rod is not subject in itself to cross bending. Many of the foreign systems also require excessive labor in placing the rods, which is commercially impossible in this country. As a consequence of these peculiarities none of the foreign systems are regarded with favor by American engineers. The field for the use of reënforced concrete is practically unlimited, the illustrations showing in general what may be done. The only limitation is in making a proper provision for expansion and contraction, the manifestation of which is sometimes rather erratic. So long as the

FIG. 46.—INTERIOR VIEW OF FIG. 45.
The openings were built in for manufacturing purposes.

length of a wall does not exceed 100 feet expansion may be neglected, beyond this length expansion joints must be provided.

Partitions may be made using light steel wire mesh and light steel rods or light steel shapes to support the wire, plastering with Portland cement and lime mixed as a mortar or using moulds, light steel rods and Portland cement and sand, moulding the partition as a continuous structure, the rods being used as a binder around door openings and the like.

Finally, the commercial value of any system is by no means a fixed quantity since it must always depend on the comparative cost of its ingredients as compared with the value of other competing materials so that a construction which may be to-day the most economical may be less economical next week.

Geo. Hill, Mem. Am. Soc. C. E.

THE NEW YORK STOCK EXCHANGE.
Architect, George B. Post. Sculptor, J. Q. A. Ward, assisted by Paul W. Bartlett.

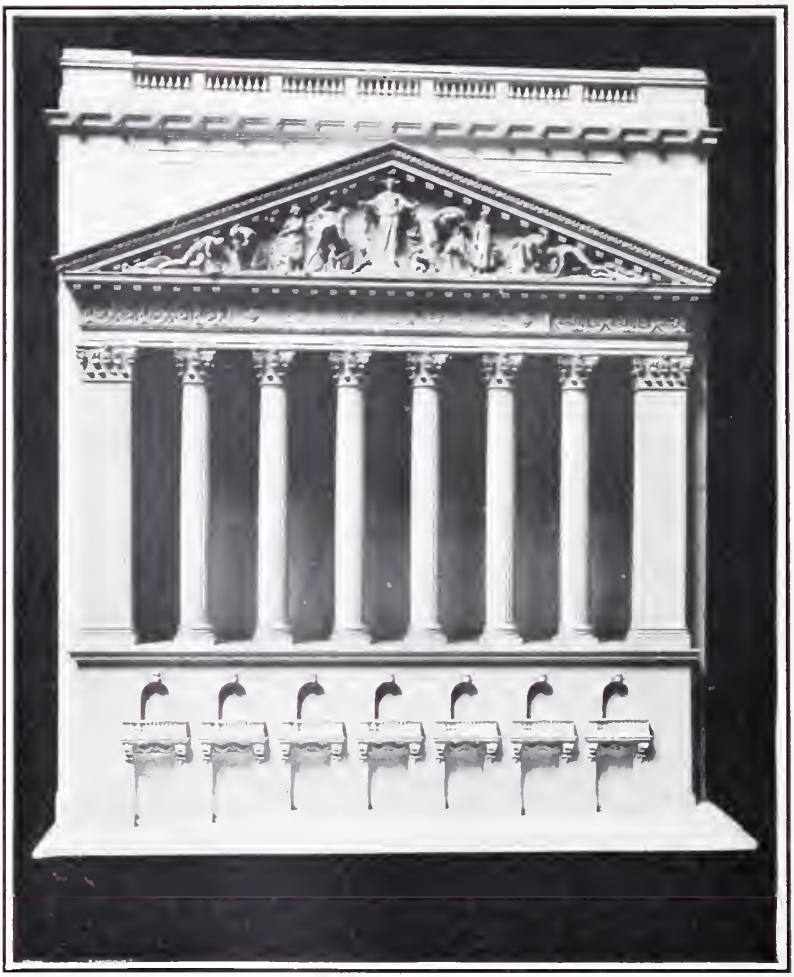
THE NEW STOCK EXCHANGE.*

DECIDEDLY the most important and perhaps the most interesting piece of architecture now under construction in New York is the new Stock Exchange, occupying the site of the old one and the spacious addition secured by the demolition of the Western Union Telegraph Building adjoining. The frontage, of something like 140 feet, thus secured would make any building noticeable and noteworthy that occupied it. But the effect of the apparent magnitude is greatly enhanced by the largeness and simplicity of the architectural treatment, the huge scale and the unmistakably monumental character.

Already the front is assured of a great success, upon which the architect and his clients are greatly to be congratulated. And it is to be noted that this success has been gained by the simplest and most direct and straightforward expression of the facts of the case, the satisfaction of the actual requirements. We can rely upon getting something like this from its architect. It is a distinction of Mr. Post's that he commonly manages to reduce his architectural problem to its simplest expression, to arrive at a "lay out" which recognizes the requirements according to their relative importance. This is really one of the most important elements, one may say the

*The photographs are taken from a model, and do not show the south wing of the Exchange.

most important element, of the "architectonic" equipment. It is that which Viollet le Duc, in his "Discourses" shrewdly and frankly recognizes as the great distinction of the Roman architects. It is not strictly an artistic quality, although it lies at the basis of artistic success in architecture. The French critic, for example, while recognizing the eminence, the pre-eminence, of the Roman builders



THE FRONT OF THE STOCK EXCHANGE.
George B. Post, Architect.

in this respect, also recognizes their inferiority to the Greeks, merely and strictly as artists. It was the "lay out," the general scheme, commonly shown better in plan and section than in elevation, that made them architects and which fact makes so idle the discussion whether, in a modern business building, the engineer should not employ the architect, instead of vice versa, as in the accepted ar-

rangement. The man who has learned how to lay out the building, and to arrange harmoniously, and with due relations of superiority and subordination, its various parts, is the real author of the building and must, in the nature of the case, employ and direct the authors of the details. Now, the training which enables a man to do this is strictly, as things are now, an architectural training, and the education of an engineer, as at present conducted, does not pretend to equip the student for it. In fact "engineer's architecture" may commonly be recognized by its ineptitude in this respect even more than by its strictly artistic ineptitude. Look, for example, at that astonishing piece of work, the New York terminal of the Brooklyn Bridge, in which the practical necessities of the case are met, after a fashion, but after such a fashion! One sees at a glance that an architect has not been there, and that he has been sadly needed.

We say that this faculty, or acquirement, is not strictly artistic. But it is at the basis of artistic success in architecure. One man who very eminently had it was Richardson, and it lay at the bottom of his artistic success. It was not by any means the Provençal Romanesque in which he happened to work, or his dwarf columns, or his exaggerated voussoirs, that made Richardson a great architect. It was his faculty for reducing his problems to their simplest expression and for emphasizing the emphatic facts of structure and arrangement. And the same "architectonic" faculty is noticeable in the works of the architect of the new Stock Exchange. One of his best works was the Chickering Hall that was pulled down only the other day, and that owed its success to the exterior expression of the concert hall as the building, and the subordination to this main feature of all the accessories and dependencies. The problem was, in fact, the same, on a very much smaller scale, as that which he has so successfully solved in the new Stock Exchange, and the solution essentially similar.

The problem was to erect a vast room (the adjective is not too big for an apartment well over a hundred feet on its shorter side and some eighty in height) which should be abundantly lighted, the lighting, in fact, being the most peremptory of its requirements. The other requirements, numerous and complicated as they were, were all subordinate to this. And this principal requirement, as nobody can help seeing who even glances at the finished front, has been made the basis of the architecture as well as of the practical plan. In fact, the architecture of the new Stock Exchange is merely "the thing itself," and that is what makes it so successful.

It was a very happy thought to employ the "order" here. Perhaps it was inevitable, and the praise due to the architect must to that extent be lessened. But at all events it looks inevitable, now

that it is done, and this look of inevitableness, that the thing could not have been other than it is, is the most satisfactory aspect a building can wear. Not even the most bigoted anti-classicist can complain when the modern architect has an opportunity to use the classic orders as the ancients used them; that is to say, as the actual construction, as "the thing itself." But that so very seldom happens. When it does happen, as in the building of the Faculty of Medicine in Paris, or in the present instance, how immensely the architecture gains in effect! The commoner method is either to build the portico outside of the building, which it darkens and makes inconvenient, as was the practice in our Greek revival of two generations ago, confining the architecture to it, and sacrificing the building to the extraneous architecture, or else to apply it to a wall which is independent of it, and with the construction of which it visibly has nothing to do. In either of these situations the plain man is disgusted with it and calls it a piece of nonsense. And the architect finds difficulty in denying that the plain man is in the right. But, if it happens that the requirements of a modern structure are such as the classic order will really supply, practically, then the medievalist must, as we say, be very bigoted indeed who does not hail the opportunity to employ the "order" in which the ancients took the simplest and most primitive of constructions, and wrought it out to a height of purity, lucidity and refinement to which more complicated constructions never attained, and which is without doubt the most perfect architectural expression ever attained by man. Lucky the modern architect to whom this rare opportunity occurs, and who, in his admiration for the works of the classic masters, does not have to resort to false pretences in order to gain the chance of reproducing what he could not produce.

This is the rare opportunity that has befallen Mr. Post in the work under consideration. His main requirement was that of a large, light and lofty room, to be illuminated from the two ends, and only incidentally from above. The ends, then, must be simply huge sash frames, of the smallest dimensions to which sash frames of masonry can be reduced, and of the most refined modelling and disposition that can be attained in the repertory of historical architectural forms. If the historical repertory did not contain the appropriate forms, then, and only then, would it be imposed upon the modern architect to devise new forms for new uses. But in this case it fortunately happens that the very thing for such a sash frame as the practical requirements indicate, and as perfectly and beautifully expresses the single "cella" of which the building actually consists, is available in the classic order. The architect who would hesitate to make use of it in such a situation would be a fool, one is tempted to say, not altogether in his haste. And one would

be tempted to say the same thing of the Goth or the eclectic who should object to the employment of a classic colonnade in a position where it so abundantly justifies and vindicates itself.

It was a very bold, but also a very just thing to do to make the whole front into this huge and single sash frame, to use colossal Corinthian columns as the mullions of an opening embracing the whole elevation. The rear elevation on New Street, of which the shafts are unfluted and the capitals at present only blocked out in the rough, is almost more impressive by dint of its very want of fin-

GROUP FROM THE PEDIMENT—"AGRICULTURE."

ish. At any rate one sees that the primary need of light has been abundantly and most appropriately met by this order, of five stories, as one discovers by the small and plain openings ranged alongside. The order would practically be as available if the space it fronts were divided into stories and were an office building instead of a monument and a temple, a place, as the scoffers say, of the most sincere worship offered in New York. But in that case it would lose all its appropriateness and all its significance. The reservation of this space at the side, and the withdrawal of the front have the

CENTRAL FIGURE OF THE PEDIMENT.

effect of an emphatic frame, which combines with the colossal scale of the order itself to detach and signalize the building.

One is bound to praise also the conception and treatment of the basement. The stories practically needed below the great hall of the Exchange just suffice to serve as an emphatic stylobate, raising the order where it can be best and most effectively viewed, and the manner in which the front has been "refused," instead of being kept in the line of the front to the southward, secures an excellent view from far up Nassau street, the vista of which is very impressively closed by the order and its pediment, and which will give a capital field for the exhibition of Mr. Ward's sculpture as well as of Mr. Post's architecture.

But it is at this point of the pediment that our praise must become qualified. The logic and sense of appropriateness which moved the architect to make his front the colonnade of a classic portico seem to have deserted him when he was inspired to complete the front of his temple with a pediment. That funny little old Parthenon, the Sub-Treasury, is made to look funnier than ever by the towering new neighbor which so outclasses and outscales and belittles it. But at least the pediment of the Sub-Treasury is the end of a roof and has a meaning, while the pediment of the Stock Exchange is entirely meaningless, when it is applied to the tall background of the attic which puts it to an open shame and shows it as a mere "survival" of a feature which had a meaning in another situation. It is sunk to be a mere and avowed frame for the sculpture. But if it had been omitted, and the attic left to tell its own story of a flat-roofed building, the frieze which would have accrued would have offered a much fairer field for sculptural decoration. No doubt the feature would have been difficult to treat. But what he has done elsewhere indicates that the architect would have been equal to the task, and he would have had the satisfaction of producing an original work, of which the originality would not have been forced or capricious, but have proceeded straight from the conditions of the problem, which are the basis of the architecture of the colonnade. It is a noble front, but it might have become yet nobler.

The fenestration of the basement is effective and dignified. But one cannot say so much for the architectural carving. The frieze of the entablature is a rich expanse of Roman foliage, apparently reproduced from a good model, and at all events in the spirit of the style. We cannot say so much for the carving of the basement. The frankly naturalistic oak leaves of the keystones of the small arches are in themselves very good in design and even exquisite in execution. But they do not belong to a Roman temple. And the feature loses much of its grace and all of its fitness when it is seen in connection with the bloated Renaissance garlands, so suggestive

of the market garden, which are draped along the lintels of the lower story. In fact, the carving of the entablature, the carving of the arches and the carving of the lintels are each incongruous with either of the others, and the incongruity takes away much of the pleasure which carving so skilful and spirited would give if the incongruities had been avoided. But these things are blemishes on a very brilliant and successful piece of work, to the author of which all New Yorkers ought to be grateful.

Montgomery Schuyler.

FRENCH SCULPTURE IN WAX.

A Modern Revival of a Lost Art.

ONE could not have a plainer indication of the growing taste for beautifying the interiors of our houses than the increasing prominence which is given annually at the Paris Salons to decorative art. Judging by the large number of exquisite objects which are on view—art, furniture, decorative panels and screens, *objets d'art* in various precious materials, and *repoussé* leather work —there has rarely been a time when the predilection for choice decoration was greater. Statuettes especially have now come to be recognized as a most essential part of the interior adornment of every refined home. Sculpture was formerly confined almost wholly to the hall and the art gallery; but we have now brought it into more intimate touch with our lives by placing it in our drawing-rooms and studies.

It is not my intention at this time to write about the silver and ivory statuettes of Barrias and others, the miniature bronze groups of Charpentier, or the classic marbles of Bartholomé—to mention only three leading French artists who are satisfying the popular taste for little sculpture; but to refer to statuettes made in a new yet old medium, namely wax. All revivals of lost arts are interesting, and few more so than the attempt which is being made by three or four Parisian sculptors to resuscitate an art in which some of the world's great artists have excelled. The production of works of art in wax dates, indeed, from the earliest times, and probably originated in Persia and Egypt, where wax was employed to embalm the dead. The Greeks are known to have ornamented their bedrooms with wax images of their children; and in the time of Alexander, when the art was wide-spread, there existed a class of artists in wax who became serious rivals of sculptors and bronze-founders in modelling the human face, animals, and natural objects of all kinds. Goldsmiths and sculptures of Italy practised the art from the 15th Century onwards and produced many masterpieces, some of which have been handed down to the present day. In the Munich art gallery is a wax descent from the cross attributed to Michel Angelo; in the Wicar collection at Lille is a wax bust of a young girl—surpassingly modelled—which has been attributed to the Florentine Orsino; and Benvenuto Cellini has left behind several fine works, including two well-known portraits of Alessandro and Francis de'Medici. In France, this interesting branch of art has

FRONT VIEW.

BACK VIEW.

"YOUTH," BY M. LÉON DELAGRANGE.

also had many celebrated adherents in the past. On the death of the kings of France, it used to be the custom to expose to public view a wax model of the monarch's face; and that of Henry IV., modelled and colored by Guillaume Dupré (1574-1662), can be seen at the present time in the Musée Condé, at Chantilly. But the most celebrated of all French sculptors in wax was Antoine Benôit,

"FEMME REVEILLANT."

By M. Léon Delagrange.

whose portrait of Louis XIV. at Versailles is the most authentic likeness of that monarch in existence.

With the example of so many eminent predecessors before him, it is not surprising that M. Stanislas Lami, who, besides being a sculptor, is an earnest enquirer into little-known by-paths of the history of art, should have been tempted to imitate them. He found, however, on commencing his work, about four years ago, that it was no easy matter to follow in their footsteps successfully. Wax

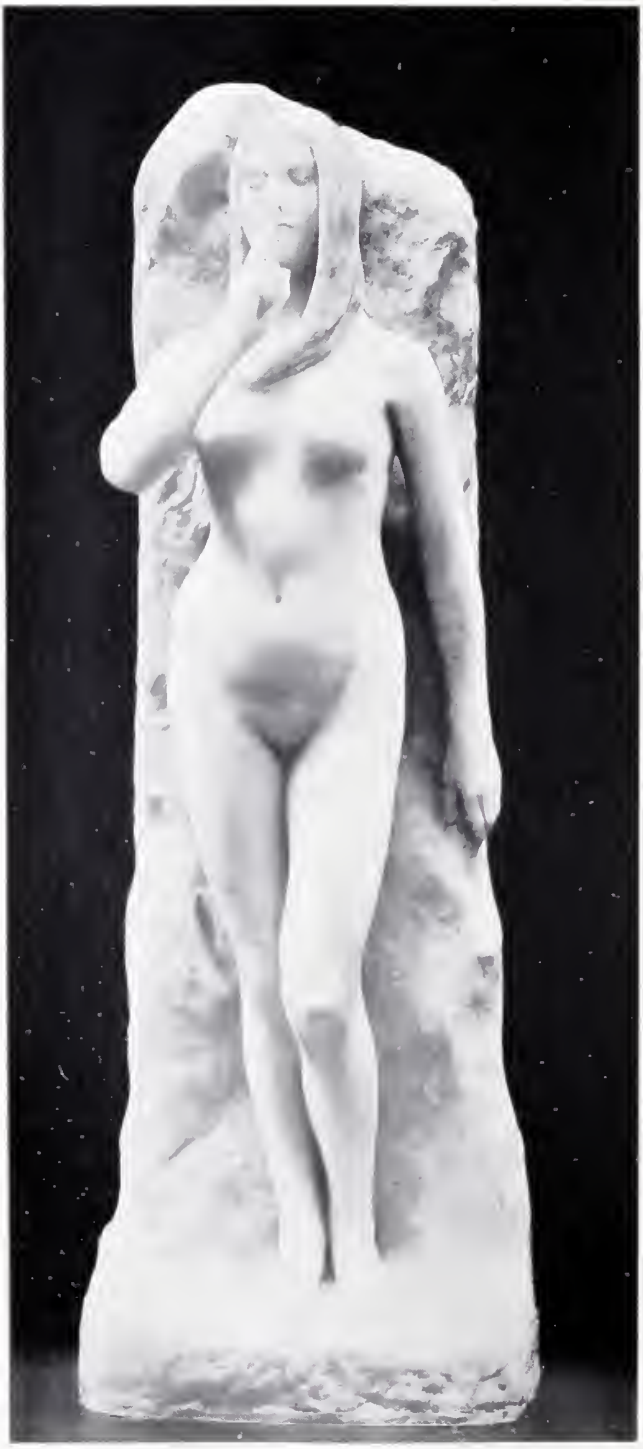
A DANCING GIRL.

By M. Léon Delagrange.

A DANCING GIRL.

might be an excellent medium in which to work, owing to the facility with which it can be cut and shaped, and the ease with which it can be colored; but the method of hardening it, so as to render it durable, had been lost with other secrets of the ancients. So he set to work to learn and to experiment. For six months he did not disdain to study in the workshops of Parisian doll-makers, and, though he was told much which was useless to him, he did not fail to pick up many hints, which, with his superior knowledge as a sculptor, were of extreme value. Needless to say, however, he produced nothing but failures during the first six months he was working on his own resources; and it was not until the expiration of that time that he acquired the many *tours de main* which are necessary to introduce the melted wax (prepared and hardened by a method which is the sculptor's secret), into the various parts of the mould which has been taken from the finished clay model. When this has been done the statuette has to be finished, in much the same way as a marble statuette, with sculptor's tools warmed to various temperatures. The work from first to last has to be carried out in a studio kept at a uniform and high degree of temperature, and the statuette must be protected from all currents of cold air, which would have the effect of causing cracks and irreparably damaging it. M. Lami has from time to time exhibited his beautiful little wax figures at the Salon; but until he had a collective exhibition at the Galerie des Artistes Modernes in Paris people were unable to judge of the importance of the revival upon which he has been engaged. This exhibition included twenty-six works—one of the finest of which, entitled "Le Silence" is here reproduced—composed of imaginative subjects, busts, and portraits, tinted and colored in a manner which makes them admirably adapted for home decoration. I may add that two of this talented sculptor's works have found their way into the art collection of a well-known American connoisseur.

Another sculptor who has been highly successful in producing statuettes in hardened wax is M. Léon Delagrange. In this year's Salon des Artistes Français he exhibits two dancing girls and a "Femme reveillant," which are amongst the most charming works I have yet seen in this medium. These *danseuses* have nothing forced or unnatural about their attitudes; their loose flowing draperies express the most graceful movements of the dance. And they delight the eye as much by their color as by the exquisiteness of their form. The clinging, diaphanous robe of one of them is a delicate azure blue. Over the breast and shoulders is a jewelled and enamelled ornament from which hang three pendants terminating with long and irregular-shaped pearls. The other dancing girl is a rosy-pink throughout, and from the enamelled gold girdle around the waist is suspended a triangular ornament enclosing an opal. A



LE SILENCE.

By M. Stanislas Lami.

AN OPERA DANCER.

By M. Léon Delagrange.

BUST IN HARDENED WAX.

By Mme. T. Peltier.

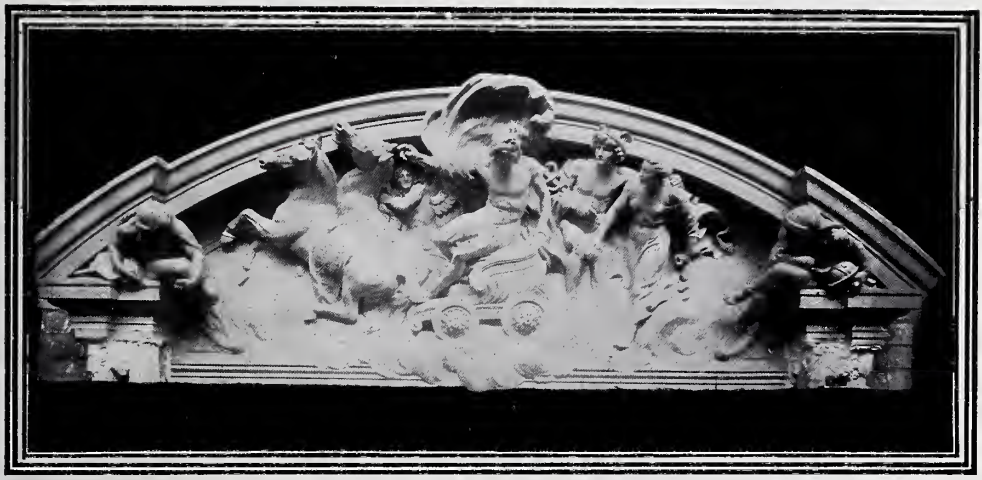
special beauty of these two superb examples of M. Delagrange's work is the effect which he has produced of transparent draperies. In parts the wax is almost as thin as a sheet of note paper, and makes one marvel at the technical skill of the artist. The characteristics to be seen in these exhibits at the Salon are present in all M. Delagrange's work, so there is no need to do more than draw attention to the photographic reproductions of other statuettes in wax which have not yet been seen outside his studio. Let me say that the sculptor, who was a pupil of Barrias, has only of recent years given up so much time to working in wax. He has worked in all the materials usually employed by sculptors and some of his bronzes have already crossed the Atlantic.

Mention has yet to be made of a lady-sculptor, Mme. Thérèse Peltier, who has also made a specialty of works in this novel material. She is a prominent exhibitor at the exhibitions of Women Painters and Sculptors.

The impression that wax is too fragile a material for serious works of art is at once swept away by the fact that the works of these three artists, like those of their predecessors, are, if not as durable as marble, at least as permanent as terra cotta. Wax hardens with age, Benoît's portrait of Louis XIV., at Versailles, which is unprotected by glass, being almost as hard to-day as a piece of marble. If modern works are placed under glass covers, it is not on account of extreme fragility but to protect them from accidents and dust. When these facts become thoroughly understood statuettes in hardened wax will become almost as popular in the ornamentation of our interiors as those in other materials.

Frederic Lees.

THE ABDUCTION OF IPHIGENIA.
M. Soulés, Sculpture.



"PROGRESS LEADING ON COMMERCE AND INDUSTRY."
By Dalou.

THE "BIG STORE" OF PARIS.

Dufayel's Establishment.

TWO powerful searchlights can be seen from all quarters of Paris every night. One is that of the Eiffel Tower and the other, which is almost as powerful, is that of Dufayel's store, one of the most interesting centers of French commerce, both on account of its magnificent decoration, and because of the system of business practiced there.

It is a credit system. For a small sum—generally the fifth of the whole price—anybody can purchase whatever household goods he may require, and settle the balance by weekly installments varying from thirty cents to four dollars. But it is not only to these facilities of payment that the Dufayel establishment owes its rapid success, but more especially because the customers are fully aware that they will not have to pay more in purchasing on credit than if they paid ready money. This system of payment by instalments is appreciated, therefore, by both rich and poor, and more than three million customers have placed orders with the firm, three thousand clerks are employed in booking and sending off these orders, which amount to $26,000,000 in the course of the year.

In order to attract and retain this vast custom, M. Dufayel has not hesitated to expend large sums, and has built on a large piece of land, measuring thirty-eight thousand square yards, an enormous store, 130 feet high, divided into floors, separated into courts, and

MAIN PORCH AND ENTRANCE TO "DUFAYEL'S."

CARYATIDES ON THE FAÇADE.

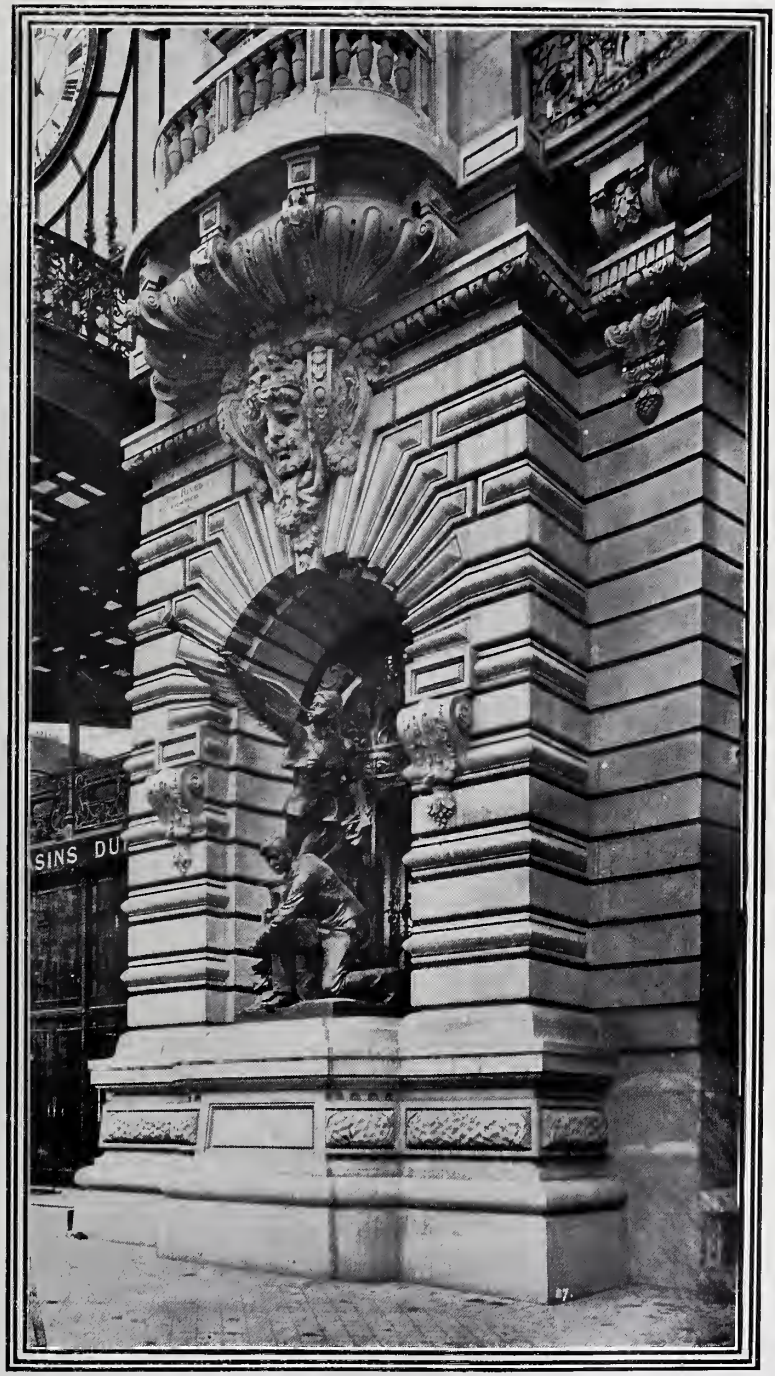
By Falguière.

decorated with a profusion of statues and paintings by great modern artists.

On entering Dufayel's store by the principal door, in the Rue de Clignancourt, it seems as though you were entering a palace rather than a shop. The porch, which is twenty-three feet wide by thirty feet high, is ornamented with carvings and statues, and surmounted by a dome, the cupola of which rises to a height of one hundred and eighty feet. On each side of the doorway is a bronze group seven feet high on a stone pedestal. They are by Falguière, and represent "Credit" and "Publicity." The same artist has also sculptured the caryatides which ornament the circular openings to the right and left of the clock—a wonderful piece of horology, which cost more than three thousand dollars and which shows the hour, day, etc., on a face seven feet in diameter. Above the clock is an enormous bas-relief in stone by Dalou, fifteen feet high, and forty-five feet long, representing "Progress leading on Commerce and Industry." In front of the façade is a railing 120 feet long by

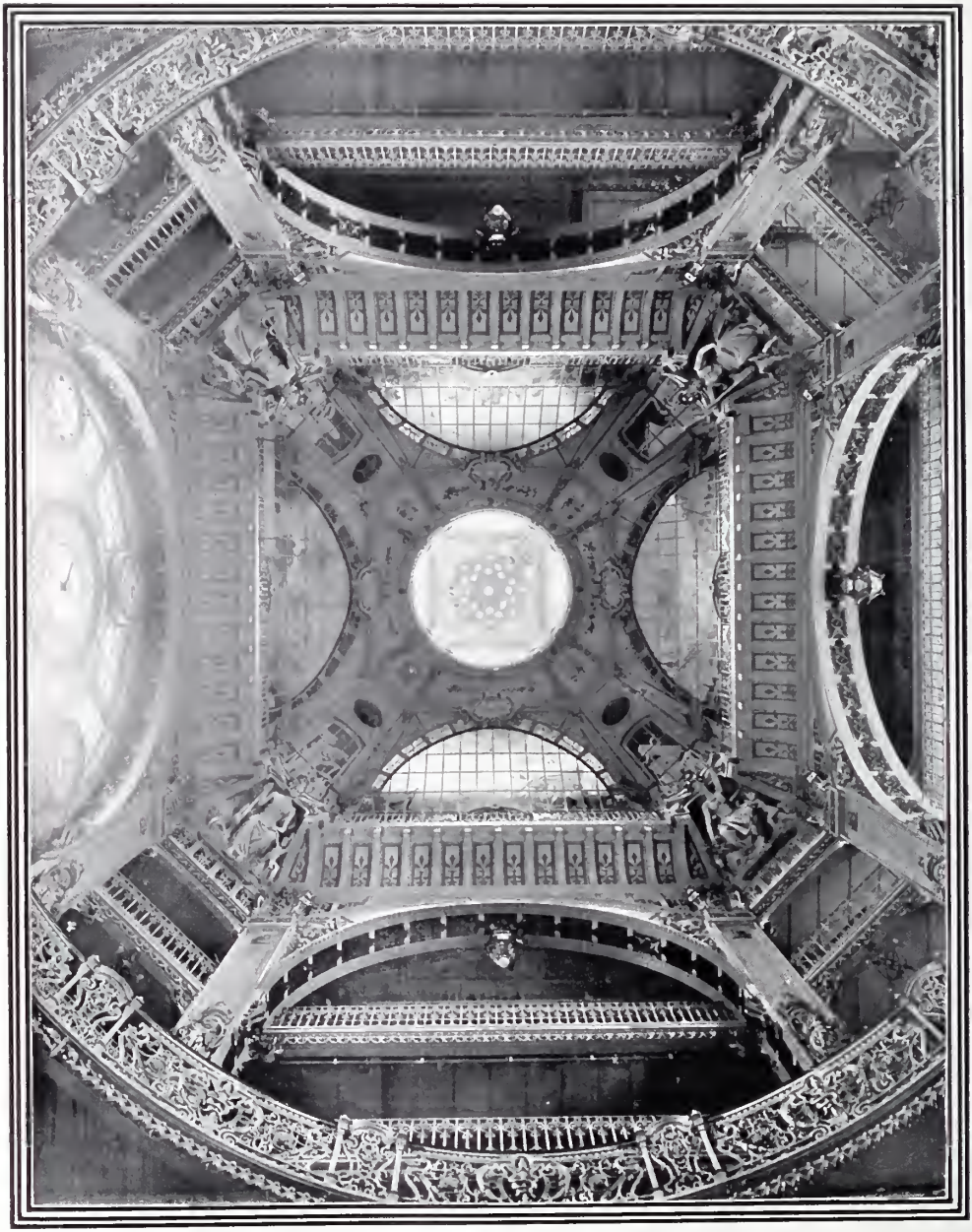
"CREDIT."

By Falguière.



"LA PUBLICITÉ."

By Falguière.



VIEW OF THE DOME FROM BELOW.

INTERIOR OF THE DOME, WITH CHARPENTIER'S "PARIS."

THE DOME AND THE SEARCHLIGHT.

thirteen feet high in wrought iron, weighing ten tons and furnished with machinery to raise it at night and lower it in the morning, worked by either hand, electric, or hydraulic power.

The interior of the dome is quite as remarkable as the outside. It is entirely constructed of iron, steel, and bronze, like the rest of the building, in which wood is employed as little as possible. The dome is supported by pillars covered with bronze plates representing laurel leaves across a bronze network. The pillars, which end in bronze caryatides, by the sculptor Hexamer, support the balcony of the second floor. The hip-rafters are ornamented with four sculptured figures; "Paris," by Charpentier; "Lyon," by Daillon; "Marseilles," by Leroux, and "Bordeaux" by Oger. Between the hip-rafters are four large decorative panels, painted on glass, after cartoons by Clairin, which enhance the general effect, and which represent "Art," "Commerce," "Science," and "Industry." Two bronze figures holding candelabra by Falguière and Dubois, some bronze masks and decorative figures, complete the decoration of the dome, which is painted in light colors and forms an attractive looking entrance to the store. Inside the cupola is a large cut-glass chandelier. On the top of this dome is a revolving light, of ten million candlepower, which can be seen at a distance of twelve miles, and which cost four thousand dollars to construct, and which makes an excellent advertisement at night.

Going rapidly through the store, we pass successively the central hall, part of which is occupied by one of the most striking architectural features of the building, a large staircase with four branches, in the construction of which several severe difficulties had to be overcome. The staircase is independent and constructed on four arches, thirty-three feet wide; each of the four branches is ten feet wide. The accompanying illustration gives a general idea of one of the three landings. The upper part of the staircase is ornamented with painted glass windows by Champigneulle, representing "Thrift," "Confidence," "Abundance" and "Labor."

On leaving the central hall we come to one of the most famous attractions of the establishments—the theatre, where, every month, M. Dufayel gives a grand musical entertainment to his customers. It is a room 112 feet long by 46 feet wide, and can contain three thousand spectators in the stalls and boxes. The stage is 52 feet high, 46 feet wide, and 23 feet deep. It will contain 200 performers, and is decorated with mirrors forty feet high and twenty-three feet wide, a gilded proscenium magnificently sculptured with figures of "Commerce" and "Industry," an embroidered silk-plush curtain, and wreathes of foilage in white and gold on pale green completing the decoration of the hall, which is an object of astonishment and admiration to all visitors.

VIEW OF THE GREAT BRANCHED STAIRCASE.

VIEW OF THE SECOND LANDING ON THE GRAND STAIRCASE.

Close to the theatre is the old *salle des fêtes*, 165 feet long and 72 feet wide, divided into two by a gallery in the form of a loggia, ornamented with marble columns and caryatides sculptured by E. Leroux. The hall is covered by a glass ceiling, transparent by day and lighted by three thousand electric lamps at night. This ceiling, 550 square yards in extent, is covered with designs in burnt glass after cartoons by H. Berteaux, representing "Day Chasing Away the Night," and—to right and left of this—"Morning," "Evening," "Dew" and "Dawn Accompanying Apollo, the god of Light." This extremely interesting piece of glass-work took two years to execute.

Passing through the shop, we come to the reception hall, which the proprietor of the establishment has had decorated most luxuriously and artistically. The compartments of the ceiling are decorated in high relief, and deserve attention. Then we pass into the "Hall of the Seasons," decorated with allegorical figures by Lalou and further ornamented with a profusion of gold wreathes and garlands. In one of the galleries of the same hall should also be noticed the painted ceramics after Luc Olivier Merson, and painted glass after Renaissance patterns. We then come to the Cinematograph Hall, the most popular of all the attractions of the establishment.

The hall in which the cinematograph is installed is in the basement, and is simply decorated with mirrors and stucco columns. The fifteen hundred persons who assist at the four performances, of one hour each, every day, do not come to see splendid decorations, but to behold all the events of the day represented. Visitors have to pay a certain admission fee, varying according to the subjects represented. The cinematograph attracts many people to the store, and is an ingenious and profitable method of advertising.

If the theatre, the salesrooms ,and reception rooms are furnished and decorated with a luxury which borders on profusion, the packing rooms and clerks' offices are, if less luxurious, arranged in a practical and thoroughly modern manner.

There are 250 mahogany desks, occupying an immense gallery in which the customers, seated in arm-chairs, await their turn to pay their instalments or to receive the "credit notes" they have applied for. For Dufayel does not sell clothes, underlinen, and many other articles directly to his customer, but gives, in return for a small instalment, an order on one of the four hundred shops which he has business connections. For such goods Dufayel pays the seller cash and recoups himself by the weekly payments. He is thus a kind of banker, but a banker who is content with a very small profit on each transaction, and which he makes not on the sale

THE THEATRE.

price but on the purchase price by getting a fair discount from the seller by paying cash down.

It is by this system, which is based on strictly honest commercial principles, that M. Dufayel has made a fortune—a large fortune. Every day 1,800 customers apply at the desk for 24,000 dollars worth of "credit notes," and 16,000 dollars is paid as instalments on 600 sets of furniture. Eight hundred cashiers start out every day to receive instalments paid at customers' houses. Each of these clerks calls at 200 to 250 places, and though the sums are sometimes not more than thirty to forty cents the eight hundred clerks bring home every night from $40,000 to $42,000. When they return they verify their accounts with eight hundred lady clerks, take note of fresh customers, etc., and there are very rarely any bad debts. They form an insignificant minority, and, though it may appear strange, considering the modest means of the greater number of purchasers, the whole of Dufayel's legal business is performed by four clerks.

Not the least interesting thing about this vast establishment is that, though selling on credit and to the poorer classes, it owes its reputation to the splendor and the enormous sums which have been expended on it. The buildings cost $9,400,000, of which the dome alone cost $1,200,000, and the statues $800,000. Decorations were $100,000. At night the store is illuminated by 11,000 incandescent lamps and 350 arc-lights. On the walls there are two hundred statues and one hundred and fifty pictures, and every day three thousand clerks display to customers five million dollars worth of goods; complete drawing-room sets from $19 to $4,000; dining-room sets, from $60 to $1,900; bedroom sets, from $39 to $1,200, and dinner services from $3.40 to $90. Also an infinite variety of household goods, which the poor can now obtain on credit and which they would be compelled to go without if they had to pay ready money.

In the stables—an immense building of five stories, splendidly fitted with all the appliances of modern hygiene—two hundred horses, and a hundred and eighty carts are always ready to deliver goods.

The *magasin* was built in eighteen months from the designs of M. Rives, who is also entrusted with the direction of the almost continual enlargements and improvements.

Besides this huge store, M. Dufayel runs an advertising and bill-posting business, and a house and estate agency, which bring in a good profit, and also serve to advertise his store, the magnificence of which attracts customers and the advantages and amusements of which help to retain them.

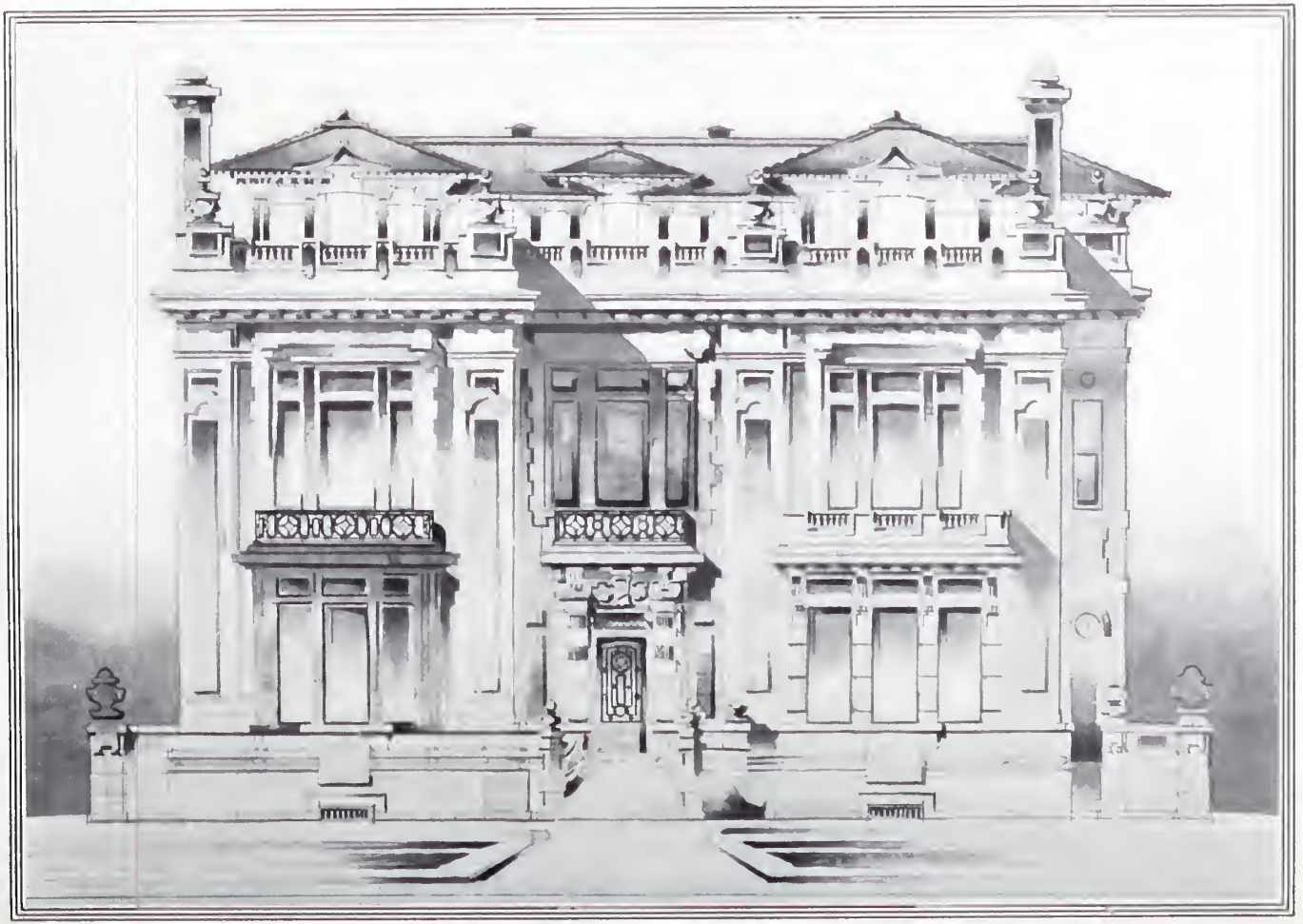
Pierre Calmettes.

THE ARCHITECT'S PORTFOLIO

OF

RECENT AMERICAN ARCHITECTURE.

A CHRONICLE IN BLACK & WHITE



THE SEMINOLE CLUB.

Jacksonville, Fla. Snelling & Potter, Architects.

Thompson, Conn.

RESIDENCE OF NORMAN REAM, ESQ.

Shepley, Rutan & Coolidge, Architects.

THE KING HOUSE.

Fair Haven Heights, Conn.

W. H. Allen, Architect.

Situated on York Square.

A NEW HAVEN HIGH SCHOOL.

Brown & Von Bern, Architects.

ALBANY TRUST CO.

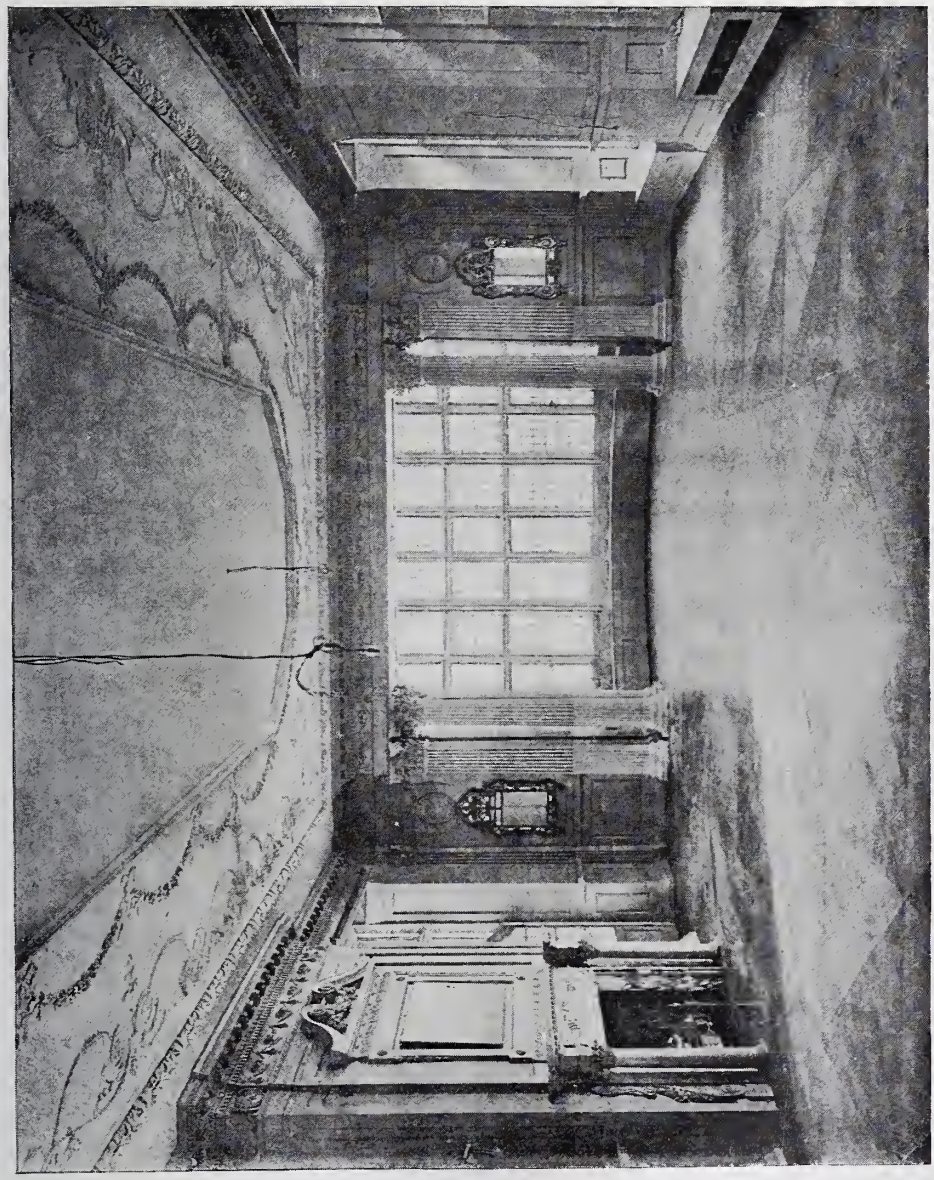
Albany, N. Y.

Marcus T. Reynolds, Architect.

RESIDENCE OF J. N. JAROS, ESQ.
No. 266 West End Ave., New York City. R. L. Daus, Architect.

BROAD STREET NATIONAL BANK.

Trenton, N. J. W. A. Poland, Architect.



DRAWING ROOM, ASHORNE HILL HOUSE. E. Goldie, Architect.

Near Leamington, England.

APARTMENT HOUSE.

Berlin. A. F. M. Lange, Architect.

APARTMENT HOUSE.

No. 58 Klopstockstrasse, Berlin, Germany. A. F. M. Lange, Architect.

Opinions Official and Unofficial.

During the past ten years the standards which control the action of the national government in aesthetic matters have most wonderfully improved. Only a decade ago Washington was almost the headquarters of American aesthetic barbarism. The buildings erected by the government in all parts of the country were practically designed by draughtsmen in the office of the Supervising Architect, and did not have the merits even of good school work. The Administration Building at the Chicago Fair had been the one palpable and inexcusable architectural failure of the Exposition. The Government buildings most recently erected at Washington had been both situated irrespective of any general plan, and had been incongruously and clumsily designed. The Congressional Library had been given a location in which it "neither confronted the Capitol nor preserved any reciprocity of sight with it, and where it stopped one of the west vistas carefully arranged by L'Enfant to be closed by the Capitol." In short, the improved aesthetic standards which were noticeable in private architecture of the large cities had failed at that time to sift through the various layers of American life and infect its central organization. The large aesthetic problems of a great nation were managed in a spirit mixed of anarchy and obscurantism.

The Improvement of Washington.

But during that ten years an immense and most salutary change has taken place. The Congressional Library itself, while most ignorantly situated, turned out to be a useful agent in stimulating interest in the aesthetic improvement in our national capital, for the mural decoration of that edifice instantly attracted attention and aroused people to the fact that the national capital might and should be made more interesting to other people than office-holders and seekers. Then the Tarsney Act, while only optional, was an excellent beginning in the difficult work of securing a higher level of design for public buildings. And finally, the plan of the commission for the improvement of the park system of the District of Columbia has been received with such general favor that it has not only enormously bettered the prospects of having all future public building and park improvements in Washington arranged and in some measure designed according to a general plan, but it has also tended perceptibly to raise all along the line the standards of government action in aesthetic matters. Of course there have been Senators and Representatives

whose enlightened vision could see nothing in the plans of the commission but a scheme to spend unnecessarily a great deal of public money; but fortunately the influence of such commercial ideas upon public aesthetic policy is becoming constantly smaller. With the intensification of national feeling there grows and spreads an increased pride in the national capital and an increased desire to have that pride symbolized by appropriate public monuments.

Fortunately President Roosevelt, more than any other man in public life, has both a generous and well-informed national spirit and certain definite standards of aesthetic amelioration. It is by no means accidental that the wife of this President is the first mistress of the White House to whom the present interior of that official dwelling was intolerably vulgar, and who has had the good sense and good taste to make an attempt at refurnishing and renovation. If her plans prevail, its interior will be restored to its primitive Colonial simplicity and decorum. While such influences as these are powerful at Washington, the advocates of aesthetic amelioration should press their advantage. The American Institute of Architects at its Buffalo meeting last fall adopted two resolutions which indicate the next important steps to be taken. One of these resolutions looked toward the creation of a national Art Commission, and the other toward the formation of a national bureau of architecture, under whose administrative charge should be placed the architectural work of all departments of the national government. Could Congress ever be persuaded to legislate along the lines of these resolutions the maintenance of high aesthetic standards by the national government might be considered secure.

Although it may take Congress some time to make up its mind to take such radical and definite steps as these, it can scarcely in the long run refuse to do so. A permanent national Art Commission, with certain powers of supervision, and, it is to be hoped, also a certain initiative, is an obvious and conservative piece of machinery. It would serve both to protect the national capital against the occasional raids of Congressional or executive barbarians, and it would be a powerful and permanent force devoted particularly to the actual carrying out of the plans of the advisory Washington Park Commission. It is quite in the line of the development of administration machinery in other departments of the national government that a commission should be constituted for a special purpose, such as the aesthetic supervision of the national capital. Congress is really as unfitted to legislate upon such a matter without expert assistance. The formation of a national administrative bureau to take charge of government architectural work is an equal necessity. The national government is a great builder. Its post offices and custom houses are frequently the most conspicuous

buildings, in the smaller cities of the country. The design of these buildings should be turned out under a system that will secure buildings of a high degree of excellence, while at the same time flexible enough to give local architects their fair chance of securing the work; and such an excellence can be secured by a constitution of a national architectural bureau, working under a mandatory revised edition of the Tarsney Act. Then the national government would be in a position to lead and encourage the progress of American architecture towards a uniformly high level of design. It may take a good many years and a great deal of aggressive agitation to bring about this result, because Congress and the American politician generally have by no means as yet gotten over their disposition to resent as an impertinent intrusion all attempts on the part of specially qualified experts to control such an easy job as the mere erection of a government building. But the stars in their courses are in favor of the reformers. Every wholesome tendency in American life is fighting on the side of specialized organization, and in the end the politicians will have to succumb.

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NEW YORK HOTELS.

The Hotels of the Past.

I.

THE hotels of New York have grown *pari passu* with the growth of the city. In simple Colonial days the taverns and inns were simple things—small "houses of entertainment." Each stage of the increasing wealth and comfort of the country was represented by hotels in which the highest point of that general wealth and comfort was marked. The hotels have, therefore, grown from the simplest inns through a million minor increments to the luxurious structures of the present day.

The New York hotel, being a product of continuous national increase of wealth and of practical inventions, has never been connected with towering personalities. When we think of the history of newspapers, for instance, we think of Bennett, and Raymond, and Greeley and Pulitzer, of those men whose genius and ideas have been indissolubly connected with the growth of the great journals. What would modern journalism have been to-day without a Bennett? Of course, in the long run, newspapers as well as hotels are a product of a large national development. And yet newspapers are, in their successive stages, partly the result of great generalizing principles originating in the brains of their founders. Underlying the history of hotels, however, there are very few general ideas. They are not, therefore, connected with great personalities. The history of the great New York newspapers could be told as the history of a few men. In the case of the hotels this would be impossible.

One generalization, however, which may safely be made, is that hotels have grown, like newspapers, from the personal to the impersonal. A hotel used to be known by the name of the man who ran it; just as the New York Herald used to be known as "Ben-

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nett's organ." But now who knows or cares to know the name of the man at the head of a great newspaper or, still more, of a great hotel? In the old hotel the smiling host was much in evidence. He was the spirit of his house. But now there is no host. He has been transformed into the manager of an intricate machine, is unseen, and unknown to the public. The hotel, like the newspaper, is at present, an institution. It is a far cry from Sam Faunce's Inn to the nameless proprietor of the Waldorf-Astoria.

The first New York hotel stood near the East River at the head of the present Coenties Slip. Governor Kieff, of New Amsterdam, had been in the habit of receiving official visitors at his private house, but finding the custom burdensome, built in 1642 a plain stone tavern at the company's expense. The building was afterwards used as the Stadt Huys or City Hall, where Peter Stuyves-

"STADT HUYS," AT COENTIES SLIP.

ant later laid down the law to the burghers. The next tavern of which we find record was the Remsen House, a little wooden building, very much like a simple shanty of to-day, and surrounded by fields and trees. It was built about 1688, and it was there that the assembly met about 1690 and passed a law for the establishment of a supreme court for the province. Another tavern, built at the close of the seventeenth century, was the King's Head, which stood at the corner of Maiden lane and Pearl street. Hemstreet relates that its proprietor, Roger Baker, was heavily fined for remarking during the trial for treason of Colonel Nicholas Bayard in 1702, that "William III. had a nose of wax and was no longer King than the English pleased."

Some of the principal taverns which stood at the close of the Colonial period were The Province Arms, The Queen's Head, The

King's Arms, and the resorts of the Liberty Boys, opposite the common (now City Hall Park); De la Montayne's and Hamden Hall. De la Montayne's inn was known, after the Revolution, as Contoit's Garden. Business grew so rapidly after the war that Contoit was obliged to move to a house on what is now known as Park place, and he called his new establishment the New York Garden. This became so popular that Contoit was again obliged to move. In 1806 he moved along Broadway to a point near Leonard street, where he secured more commodious accommodations, and established one of the most famous of the old New York inns and gardens combined. Another garden, Ranelagh, was originally the private residence and grounds of old Anthony Rutgers. When he died, in

CONTOIT'S "NEW YORK GARDEN," 1828.

1750, the house was transformed into a public "house of entertainment," and a hall for dancing was built in the middle of the lawn. Twenty years afterwards the inn was destroyed and on its site was built the New York Hospital, which stood, with its fine lawn and garden, many years on Broadway. Still another famous garden of the period was the Vauxhall, originally called the Bowling Green Garden, at the foot of Warren street.

One of the most famous inns of the time preceding and during the Revolutionary War is still standing and doing business in New York City. From it a very fair idea may be obtained of the character of the more pretentious taverns of that period. It is called Faunce's Tavern, and stands at the southeast corner of

Pearl and Broad streets. It is a plain brick, five-story building of thirty small rooms, with small windows and low ceilings. Sam Faunce turned the house into a tavern in 1762. He was a famous caterer, and the inn was noted for the excellence of its pickles and preserves. Up to the eve of the Revolution this tavern was the seat of the "Social" Club, which was the forerunner of the "Union," "The Union League," and "The Manhattan." During the war "Black Sam," as Faunce was called, entertained successfully at his tavern red-coats and patriots. "He furnished many a stirrup-cup to the departing Britons and welcomed to his table the victorious Washington." It was at this tavern that George Washington had a

FAUNCE'S TAVERN.

farewell meeting with his officers, after the war. A picture of that scene still hangs in the assembly room of the inn.

Another inn of Revolutionary days was the Bull's Head tavern, which, built in 1760, stood on the site of the old Bowery Theatre, at the northern edge of Chatham Square. Charlotte Cushman, the elder Booth, Lester Wallack and Edwin Forrest scored their greatest triumphs on the spot where years before the English soldier drank himself into insensibility and the American patriot braced himself for another blow for liberty. Opposite the upper end of Bowling Green stood Burns' City Arms tavern. It was there that Benedict Arnold lodged after his immortal treachery. On the same side, opposite what is now Liberty street (then Crown street), was the King's Arms Tavern, a resort for British officers and young

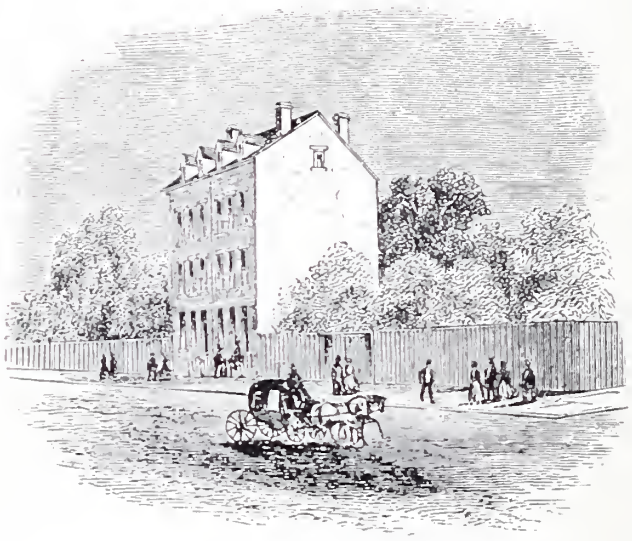
American gentlemen. Another lounging place for the British was George Burns' Coffee House. Many other inns served as headquarters of the Sons of Liberty and of political societies; and, like the hotels of the present day, they were the centers of news and of gossip.

In the twenty or thirty years following the war the inns were increased in number and some of them began to be called hotels. They were kept on the "American plan," a dollar a day being a good round sum for board and lodging. A house of twenty rooms was regarded as commodious. Meals, prepared by the landlady, were given at fixed hours and were very plain. Meat and game, however, abounded, and the favorite wine, Madeira, was provided in large quantities. A bar, a ball-room and a stable were the necessary adjuncts of every inn. For some time after the war, Faunce's Tavern, with its thirty rooms, remained the largest. But in 1793, on the site of George Burns' Coffee House, Broadway and Cedar street, was erected the City Hotel, where the fashionable City Assembly met, and where the "Three Hundred" of that day were accustomed to stay. In 1812 five hundred notabilities attended a banquet at the City Hotel in honor of Hull, Decatur and Jones, and Lafayette was entertained at this hotel as late as 1824. Other taverns of the day were Bunker's, Washington Tavern, and the Tontine Coffee House in Wall street. It was in the latter place that the dinner to John Jay took place in 1795, in honor of his return on concluding the first commercial treaty between the United States and Great Britain.

By 1812 the places of public entertainment in New York were very generally called hotels, rather than inns or taverns, the primitive type of which had disappeared. The City Hotel was still the most extensive building of the kind in the city. The ground floor was occupied by stores, and the rooms were many, and business thriving. The other leading hotels at that time were the Washington Hotel (then the new name for Faunce's Inn); Merchants' Hotel, on Wall street; the Tontine Coffee House, Wall and Water streets; Phoenix Coffee House, opposite the Tontine; Mechanics' Hall, Broadway and Park place; Washington Hall, Broadway (opened in 1813); Banks' Coffee House, on Nassau street; and Tammany Hall, which was opened as a hotel on Nassau street in 1812.

Even as late as 1837 the City Hotel held the first place. Hotels were at that time few in number and inadequate in accommodations; they were built of light colored brick and were, as a rule, four stories high, never more than six, and of very simple construction and appointments. Delmonico, however, had arrived in New York about 1830, and first-class restaurants, with "fancy"

dishes, champagnes, light wines and better bread and coffee were introduced. Besides the City Hotel the main houses of the day were the Irving House, Chambers and Broadway; The American House, at 135 Fulton street; the Exchange Hotel on Broad street; Lovejoy's, in Park row; and Tammany Hall, then the headquarters of the Locofocos, as the Democrats were called. This was one of the first houses conducted on the European plan. In 1833 the United States Hotel, the building of which still stands in Fulton street, was opened. It was built by a man named Holt, and was very large and imposing. It was dubbed "Holt's Folly," because it was a failure at that time, on a large scale. One of the most famous restaurant keepers of the day was Windust, whose basement in



NIBLO'S GARDEN.

Park row was the resort of Edmund Kean, Junius Brutus Booth, the Wallacks and the Kembles.

The great hotel event of that time, and one of the big things in the history of hotels, was the opening of the Astor House in 1836. It was copied, in style, after the old Tremont House in Boston, and was built by John Jacob Astor and sold to his son William B. Astor for a dollar and a quarter, the story goes. As late as 1865 this hotel was pointed out as a mammoth structure, and it is still, as is well known, an important New York hotel. Built of massive granite, it formed a striking contrast to the brick hotels, all of which, except Faunce's Tavern and the United States Hotel, have since disappeared. It soon outstripped the City Hotel in every particular, and for a long time was the leading New York house. It became the resort of the rich and of those distinguished in public life.

Whenever in New York Daniel Webster made a home of this hotel, where he was a free guest. He was a great friend of one of the office boys, Parker Jones, who, Webster used to say, had a smile like a rainbow. It was in the Astor House that the Chamber of Commerce gave a banquet to Webster in honor of his reply to Haines. His room at the Astor is still pointed out with pride.

Between 1836 and 1859—when the Fifth Avenue Hotel was opened—many large and, for their day, fine hotels, for the most part since razed to the ground, were built. In 1840 was opened the New York Hotel, corner of Broadway and Waverley place, an aristocratic house, where many fine old families stayed, and where Jenny Lind was accustomed to stop. In 1850 came the Clarendon, on the European plan, also an aristocratic place, where many for-

THE ASTOR HOUSE.

eign diplomats stayed. A house, opened about the same time, and in much the same style, was the Irving Hotel, Chambers street and Broadway. In 1852 the St. Nicholas and the Metropolitan, on an expensive scale, and introducing "bridal chambers," were opened. The St. Nicholas was built on the Broadway side, in marble, and in that respect was an architectural innovation, so far as New York hotels went. This house was the largest and finest hotel in the country and remained such until the erection of the Fifth Avenue. It was very sumptuously furnished, of solid rosewood and had double the capacity of the Astor House. The mirrors alone cost $60,000. It is said that the furniture cost more than the furniture of the Waldorf-Astoria. In size it was larger, it is said, than any New York hotel with the exception of the combined Astoria and Wal-

dorf. In 1854, two hotels still doing business, the Brevoort and the Everett House, were opened on the European plan, and were of a high order. The latter house took its name from Edward Everett, a portrait of whom still hangs in the reception room. The Everett House is structurally a good example of the old style of New York hotels. It is built of brick, but is very solid. Its rooms are large and pleasant. It is full of the old decorative furniture and enormous mirrors. Three old mirrors still in the house cost $7,500.

An old hotel man, prominent in that line of business for fifty years, remembers at least thirty important hotels which have been destroyed in the last forty-five years. As the city grew northward, the old downtown hotels, the important ones mainly situated on Broadway, gave place to business houses. This old gentleman remembers that in 1853 there was a small house, called the Washing-

THE EVERETT HOUSE.

ton Hotel, near the present Battery station. The Battery was then open ground, and the old Castle Garden stood where the Aquarium now is. It was there that Jenny Lind sang in 1850, it being the largest concert place in New York, the Madison Square Garden of that time. Ascending Broadway from the Battery the old gentleman's memory brings us in contact with Judson's Hotel, then the Howard House, between Maiden lane and Liberty street. Next came the popular Franklin House; then, on Cortlandt street (a great hotel street), the National, Winchester and Merchants' hotels. In those days this was the busiest part of the city. Clinton Hotel stood on Beekman street, and Earl's in Park row. Next came the Astor, the only one of these hotels which was not of brick, and the only one still standing; the American Hotel, corner of Park place; the Irving House, already mentioned in another connection; Manhattan House, on Murray street, kept by an uncle of W. S. Hawk

of the present Manhattan Hotel; the Wyckoff, on Warren street. Above the Irving House, on Broadway, was Taylor's Hotel, which was the first hotel to introduce the "European plan." "It created more furor," said the old hotel man, "than the Waldorf-Astoria." It was filled with mirrors and carved sofas and was a great place for the swell *demi-monde*.

BROADWAY CENTRAL HOTEL.

At that time the "Tenderloin" extended from the Astor House to Canal street; the "social evil," as it is now called, had its seat mainly in hotels on the side streets near Broadway, and caused, before the war, comparatively little comment. The "Tenderloin," like everything else, has moved northward. The city reached only to about 50th street; the business part was bounded on the north by

Canal street; and St. Mark's place and Second avenue, as far as 22d street, were the "swell" residence sections.

To continue our walk up Broadway with the old hotel man: Above Taylor's was the old Carleton House, near Spruce street; then came the New Haven House, which stood near the depot, the terminus of the New York & New Haven Railroad, at the lower corner of Canal street and Broadway. The Brandeth House, the St. Nicholas (mentioned in another place) and the Metropolitan, corner of Prince, were the next in order. The New York Hotel, of which we have already spoken, stood at the corner of Waverley place and Broadway.

From the vicinity of Union Square up Broadway and Fifth avenue the number of hotels razed or otherwise destroyed is com-

SITE OF FIFTH AVENUE HOTEL, 1852.

paratively small. The Spingler House, which was situated near the spot where Tiffany's now stands; the St. James, which stood on the site of the present St. James building, corner 26th street and Broadway; and the Windsor, destroyed by fire within the memory of all of us, are the principal hotels above Union Square which have disappeared. The great majority of the important hotels built in the upper part of the city just before or after the war are still as they were. The present Morton House, called previous to 1864 the Union Square; the St. Denis; the Sinclair; the Hotel Jefferson (formerly the Hotel Dam); the Clarendon; the Everett House, the present Union Square; the Continental; the Brevoort, and the large hotels which sprinkle upper Broadway and are still more modern, belong to a hotel section of the city which, although it has witnessed many additions, has undergone little demolition.

To resume the historical thread of the great old hotels still standing: Faunce's Tavern, the Astor House, and, with the Brevoort, the old group about Union Square, were up to 1859, the most important. In the latter year the next and really last great historical hotel—the Fifth Avenue—was opened.

In an old newspaper I find the following: "Madison Square in 1851 was a wild and almost deserted suburban piece of property, and was mainly known for its vicinity to the famous road-house of Corporal William Thompson, situated where now stands the Fifth Avenue Hotel." The road-house was known as the Madison Cottage, and had stood for many years. It was surrounded with sheds and stables. A short distance above the house was a magnificent tree, on the spot where the St. James stood at a later date. A

THE FIFTH AVENUE HOTEL.

smithy was located at the spot which is now the entrance of the Hoffman House. A flower garden and market stretched along Broadway just above, and in the neighborhood was the old House of Refuge. In 1853 Madison Cottage was torn down to make room for the Hippodrome, which was then introduced in America and became very popular. Hemstreet relates that people "thought that the very worst thing that could be imagined happened in 1856, when the Hippodrome was removed to give place to the present Fifth Avenue Hotel."

The Fifth Avenue may fairly be called the first great modern New York Hotel, and is interesting from an architectural point of view. The style is pure Corinthian, and is carried out in the interior arrangements. The material is marble—a wonderful thing in those

days—the corridors are broad, the rooms commodious. It is an enormous hotel, covering eighteen city lots; but land at that time was so cheap that there was no such necessity of economizing space as there is now. Consequently, the Fifth Avenue remains an almost unique example of general largeness and roominess of construction and accommodation. The present proprietors are anxious that their hotel should not be represented as Noah's Ark; and, indeed, the Fifth Avenue is still "in it," with the great modern houses.

And what a history the old house has had! From the visit of the Prince of Wales in 1860 up to the present day, this hotel has been the resort of the titled, and the distinguished presidents, senators, governors, foreign noblemen and ambassadors, famous politicians, admirals, generals and emperors have stopped at the Fifth Avenue. During the war army and navy officers gathered there, and its corridors were an exchange for news. The movement for the nomination of Grant began there. It was there that the Emperor Dom Pedro of Brazil held court. In 1881 Prince Napoleon, heir to the throne of France, was entertained at this hotel. In 1883 President Arthur received the Corean Embassy in its spacious halls. Instances equally glittering might be indefinitely multiplied.

The effect of the war on the hotel business was good. The hotels were more prosperous towards the close of the contest than ever before. Five large hotels were built between 1860 and 1865—the Albemarle, Hoffman, St. James, Grand and Bristol. In 1871 came the Gilsey House, the first with an iron shell, and which took first rank among houses on the European plan. A famous house also on the European plan, the first to introduce coaching parties, was the Brunswick. In 1873 the Windsor and the Buckingham began their careers. A few years later saw the Bartholdi, the Grand Union, the Park Avenue and the Murray Hill. A newspaper writer said in 1837: "The Windsor, the Fifth Avenue, the Metropolitan, the Park Avenue, St. Nicholas and Clarendon are the only first-class hotels in town retaining the old *table d'hôte* system." A newspaper paragraph in 1881 runs: "The most extensive and elegant hotels in the city are the Fifth Avenue and the Windsor . . . the best on the European plan are the Brunswick, the Buckingham, the Brevoort, the Grand, the Gilsey, the Hoffman and the St. James." In 1883 the Windsor was referred to as the headquarters of the financial interest. "At night," says a newspaper writer, "its corridors form a sort of supplementary Stock Exchange." At the same period the great coal men of Pennsylvania and Democratic politicians went to the Hoffman House, great railroad men to the Gilsey, great oil men to the St. James, and actors to the Morton, the Union Square and the Dam.

Through the general use of electricity and the telephone, the steel construction, and many other luxurious applications of mechanical inventions, the houses of the last few years represent the latest and the most important stage in the development of hotels. A description of the great hotels of very recent origin, such as the Plaza, Imperial, Savoy, Holland, Waldorf-Astoria, Netherland, Majestic and Manhattan, as well as of some in process of design or construction, will be reserved for another article.

The rapid increase of late years in the number of hotels has given rise to the frequent statement that the business is overdone. But in 1860 there were probably more hotels in proportion to the population than there are now. We have seen that there have been more than thirty hotels razed to the ground within the last forty

A CITY BUILDING IN THE DAYS OF JACOB KIP.

years. That fact, with the immense increase of population, naturally necessitated, and still necessitates, the continual building of hotels. It is doubtful if all the hotels in New York can accommodate more than 30,000 people. It is not surprising, therefore, that within the last few months plans for several more enormous modern caravansaries have been formed. In the next article these, the very latest hotels, will be described.

William Hutchins.

The first part of the above article is compiled largely from materials drawn from "When Old New York Was Young," by Charles Hemstreet; "The Memorial History of the City of New York," edited by James Grant Wilson; "One Hundred Years of American Commerce," edited by Chauncey M. Depew; and "New York During the War of 1812," by R. S. Guernsey. The material for the second half of the article was obtained from old newspapers and from an invaluable interview with an old hotel man, who seems to remember, in a wonderful way, the history of the hotels during the last fifty years.

CONTEMPORARY FRENCH SCULPTURE.

IT is uttering a sort of commonplace to say that sculpture is an art which has arisen logically out of architecture and must remain subordinate to this master art. Yet, when one casts a glance over an exposition of modern sculpture, whether it be that of the Musée du Luxembourg, the Centennial Exposition, the Decennial Exposition, or the Annual Salon, it seems clear that a complete separation has taken place between the two arts, and that the army of figures of all sorts and sizes which one sees gesticulating with all their might on their socles or pedestals, have entirely forgotten their fundamental function of auxiliaries to the art of construction and decoration.

In former times, different as were the æsthetics of the Middle Ages and of the century which saw Louis the Fourteenth, the works of our Gothic image-makers or of our academical sculptors possessed at least this common feature—the observance of a higher law of harmony, imposed by the workmaster who supervised the erection of the cathedral or by the architect who had designed its façade or its ground floor. True, it still happens to-day that the interior or exterior of an edifice is ornamented with alto-relievo figures, but the sculptor, in executing them, is either ignorant of the future destination of his decorative piece (the grave *Pensée* of M. Gaston Michel was assuredly not intended by its author to decorate the box-office of the Opéra Comique), or acts as if he were, and seems not to care what place his creation occupies in the fabric of which it ought to form an integral and harmonious portion. To confine ourselves to the Opéra Comique, the statues which have been placed in the niches on the façade look like articles of *virtu* standing upon a shelf, while Falguière's sculptures, which have been given a lodging at the foot of the stairs, could not possibly be less in accord with the general effect to which it was their purpose to contribute.

If we now venture into the midst of that army in disarray, of which we have spoken above, and examine the several units composing it, we shall find that never perhaps has the French school displayed talents so varied, so supple and, in certain cases, so powerful. Our sculpture has undoubtedly lost that discipline which in past times constituted its harmonious unity; but it may be that its very conquests, its successive emancipations, have been the cause of this. It has become very independent, very complex, and, like every modern art, somewhat forgetful, both of the reason of its existence and of the boundaries fixed by logic to its expression. But are not the architects also a little to blame for not having had

the wisdom to utilize and direct this art, which, during the course of the nineteenth century, was undergoing a transformation, and after a period of anæmia was becoming vigorous and free, while architecture remained in the trammels of ancient formulæ?

The present tendencies of this art, left to itself and as it were deprived of support, appear at first sight rather confused and incoherent; but it is not difficult for anyone accustomed to analyze, and possessing a knowledge of the antecedents, to detect the several currents that have developed themselves. This confusion and this complexity are common to all the other branches of modern art and are due to the fact that, in our day, the new schools, new genres, new departures, appear in succession without one replacing another. If ever future historians write that in the France of the nineteenth century romanticism supplanted classicism and was in its turn dethroned by realism, which itself had to give way to impressionism or neo-mysticism, they will have formed a very wrong and very incomplete notion of our modern art taken as a whole. To cite only one example, drawn from the domain of painting, it is evident that in the matter of landscapes a distinct reaction against impressionism has now set in, as is shown by the works of such artists as Ménard, Cottet, Danchez and others; but his does not prevent the impressionists from continuing to paint according to the method introduced by them, while certain painters do not seem even to have perceived this innovation, for they still follow the methods in vogue half a century ago.

The same is true of sculpture. The revolution which brought romanticism to the front in the earlier half of the nineteenth century was even less general as regards sculpture than in the domain of painting. Pradier proceeded in the footsteps of Canova, and Pradier's pupils are not all dead to-day. They have themselves made disciples, who imperturbably continue the traditions of classic art. Chapu, who died prematurely, left a few sober, powerful works in this genre, such as *La Jeunesse*, which figures on the monument to Henri Regnault, and *Jeanne d'Arc*, in the Luxembourg. His contemporaries Guillaume and Thomas have also continued to look to antiquity for inspiration in producing their severely classical works, as is clearly proved by the *Les Grecques* and the *Mariage Romain* of the one and the *Virgile* of the other.

But alongside of these followers of tradition the example set by the great innovators of the century has not been lost. Rude and Carpeaux, who successfully strove to restore life and animation to our modern sculpture, have been followed by a galaxy of men—Southerners for the most part—who have sought ardently after that thrill of impassioned life which pervaded the works of the sculptor of *La Danse* (in the Paris Opera House) or of *Les Quatre*

LA PENSÉE, BY M. GASTON MICHEL.

STATUE IN HIGH RELIEF OF HERO AND LEANDRE IN THE LUXEMBOURG.

BAILLY, BY AUBÉ.

parties du Monde (in the Luxembourg). Falguière, Mercié, Injalbert, Puech and other lovers of supple, lifelike forms, have broken once for all the old academical cast and renounced all balance and reserve; but in so doing they have contributed perhaps more than anyone else to the breaking away from the venerable laws governing the plastic art as related to monumental sculpture, and their works, extreme and exuberant even when they profess to be decorative, have had the effect of widening that breach between architecture and sculpture to which we have referred above.

Others, possessed of more wisdom perhaps, have learned in particular from Rude's teachings, supplemented by Barye's, that firm, calculated precision which results from studying nature. Such is the case with Frémiet, a nephew of Rude's. His style is robust and headstrong; he has never striven very much after the effects proper to decorative sculpture: these effects have come, so to speak, without having been sought for, as witness his series of equestrian statues, his alto-relievos of prehistorical subjects (in the Museum of Natural History) and his animal figures, which, whether they be small or whether colossal, always have a boldness and a fidelity about them which are most characteristic. Many are the animal sculptors who have likewise trodden in the steps of the great Barye and achieved similar successes as the result of conscientious study. Amongst these are Cain, Mène, Jacquemart and, of the younger ones, Gardet and Peter.

Modern sculpture, moreover, has been enriched in other ways besides this conquest of the animal world—the world of untamed nature. At the same time, and indeed even before 1830, the field of modern history had been thrown open to our artists, and Greeks and Romans had ceased to be the only subjects considered worthy of being resuscitated in marble or bronze. David d'Angers was the most prolific amongst the creators of modern effigies. He was, however, an artist with more ambition than genius; demi-revolutionary, as he was, he could not entirely shake himself free from the classic theory, and future ages will assuredly not ratify the extravagant praises which his contemporaries showered upon him. Since his time the historical or commemorative statue has flourished more than ever. Among the names of artists who have devoted themselves to these resurrections and brought to bear thereon the greatest amount of knowledge and vigor, and shown the truest conception of the past, we again meet with that of Frémiet, to which are to be added those of Paul Dubois, Barrias, d'Aubé, not to mention others. Exact and instinct with life as their works are, however, there is one fault in particular to be found with them (a fault for which we are not sure the sculptor is to blame), namely, that they do not thoroughly harmonize with the features

LA DANSEUSE, BY FALGUIÈRE.

L'ENFANT AU POISSON, PUECH.

PORTRAIT OF CAMMILLE SAINT-SAËNS. BY M. PAUL DUBOIS

of the public places in which they are set up; and here again we come upon that lack of decorative value and signification which has seemed to us inherent to all our modern sculpture.

The realistic movement has also exercised an influence over our sculptors. After Millet, Courbet and all the landscape school had pictured the poetry of rustic life, there appeared at the Salon farm laborers in marble and shepherdesses in bronze. We still see them to-day, side by side with the Olympian divinities of our persistent classics, scantily-dressed huntresses or disheveled dancing girls, figures of the Middle Ages, or learned professors in frock coats,

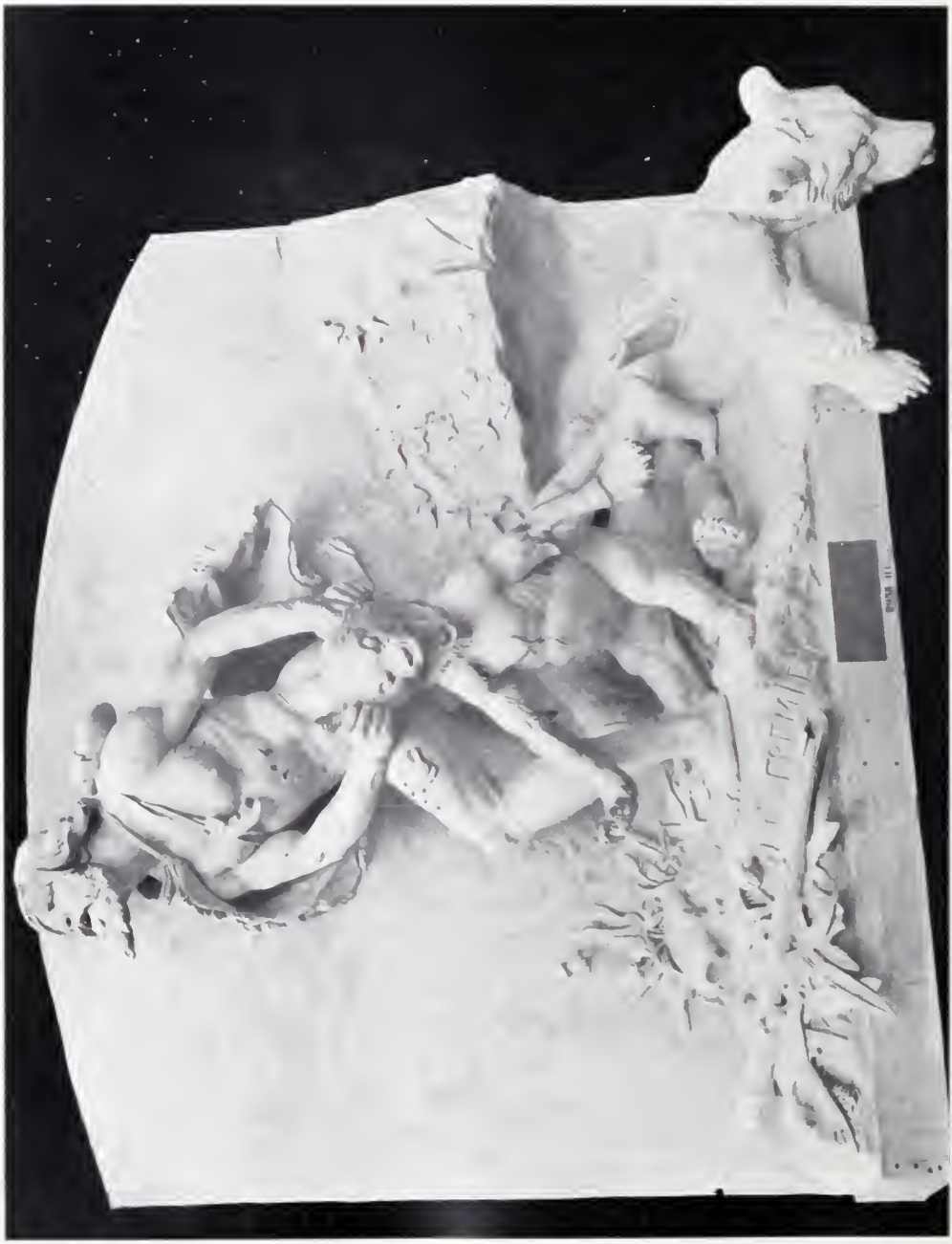
THE RUNNERS, BY M. A. BOUCHER.

chiseled by our historical sculptors. But these academical figures—such as Boucher's *LaTerre* or his *Faneuse*—conscientiously as they may have been wrought, have precisely the defect of being nothing more than fine pieces of work destined, when the Salon closes, to be placed amidst the dull solitude of some museum, instead of coming into contact with our daily life and playing an effective part in the beautifying thereof.

Dalou, who died recently, was almost the only one amongst us who succeeded in imparting a monumental character to these studies of actual types. Take as example his Monument du *Chim-*

IN THE FIELDS, BY A. BOUCHER.

LOUIS XIII. LOSTIL DU MANEGE, BY. E. FRÉMIET.



A MAN OF THE STONE AGE, BY E. FRÉMIET.

iste Boussingault (in the Arts et Métiers College). He also managed, in his *Triomphe de la République*, to combine his love of life and action with a knowledge of composition and equilibrium which reminded one of the best traits of our classical decorators. This last-named work will remain the masterpiece of his career. Dalou was eminently a decorator, and the work he did proves that those qualities which distinguished Carpeaux, his master, and Rude, whose teachings he seems to have assimilated to a still greater degree,

A GREAT DANE, BY GARDET.

find scope even in monumental sculpture on a large scale. He produced some excellent types of this class.

It is also to be noted that this aim has been kept in view to an ever-increasing extent by certain of our modern sculptors. We know of the noble effort made by Bartholomé in producing his *Monument aux Morts* (in the Cemetery of Père Lachaise), in which the profoundest thought and the most touching sentiment to be met with in the whole range of modern art are expressed with such grandeur and such harmony. Amongst the fundamental ideas underlying the irregular, impassioned productions of Rodin, that of monu-

THE SECRET, BY A. BARTHOLOME.

HEAD OF PUVIS DE CHAVANNES, BY RODIN.

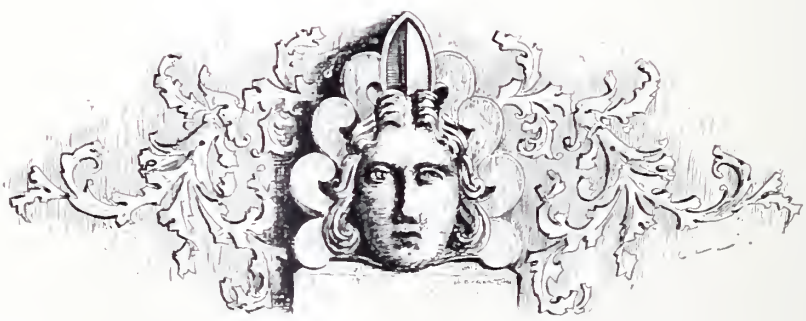
A BURGHER OF CALAIS. BY RODIN.

CHAPITEAU DES BAISERS, BY E. DERRÉ.

mental effect, is certainly one of the most prominent. His celebrated —*Porte de l'Enfer*, incarnating his early ambitions, the realization of which, however, was long delayed, while not recalled to one's mind by his *Balzac* or his *Bourgeois de Calais*, surely explain and justify the simplifications and the accentuation of expression which distinguish the second named work, the roughnesses of the last named, and the excessive enlargement of some of his busts.

Let us conclude this rapid survey of contemporary French sculpture, several departments of which we have necessarily passed over (that of portraiture for instance, universally cultivated in all the groups and almost everywhere with equal success), by mentioning that highly promising work given to us three years ago by the young sculptor Emile Derré—*the Chapiteau des Baisers*. It is with pleasure that we find in it, as we have found in Bartholomé's work, but in a different spirit, that accord between the deep, delicate sentiment which characterizes the productions of modern genius and the decorative perception by means of which our sculpture, alert and many-sided as it may be, can alone recover its *raison d'être* and so to speak, its equilibrium.

Paul Vitry.
(Attached to the Musée du Louvre).



THE MAIN FAÇADE OF THE NEW STATION.

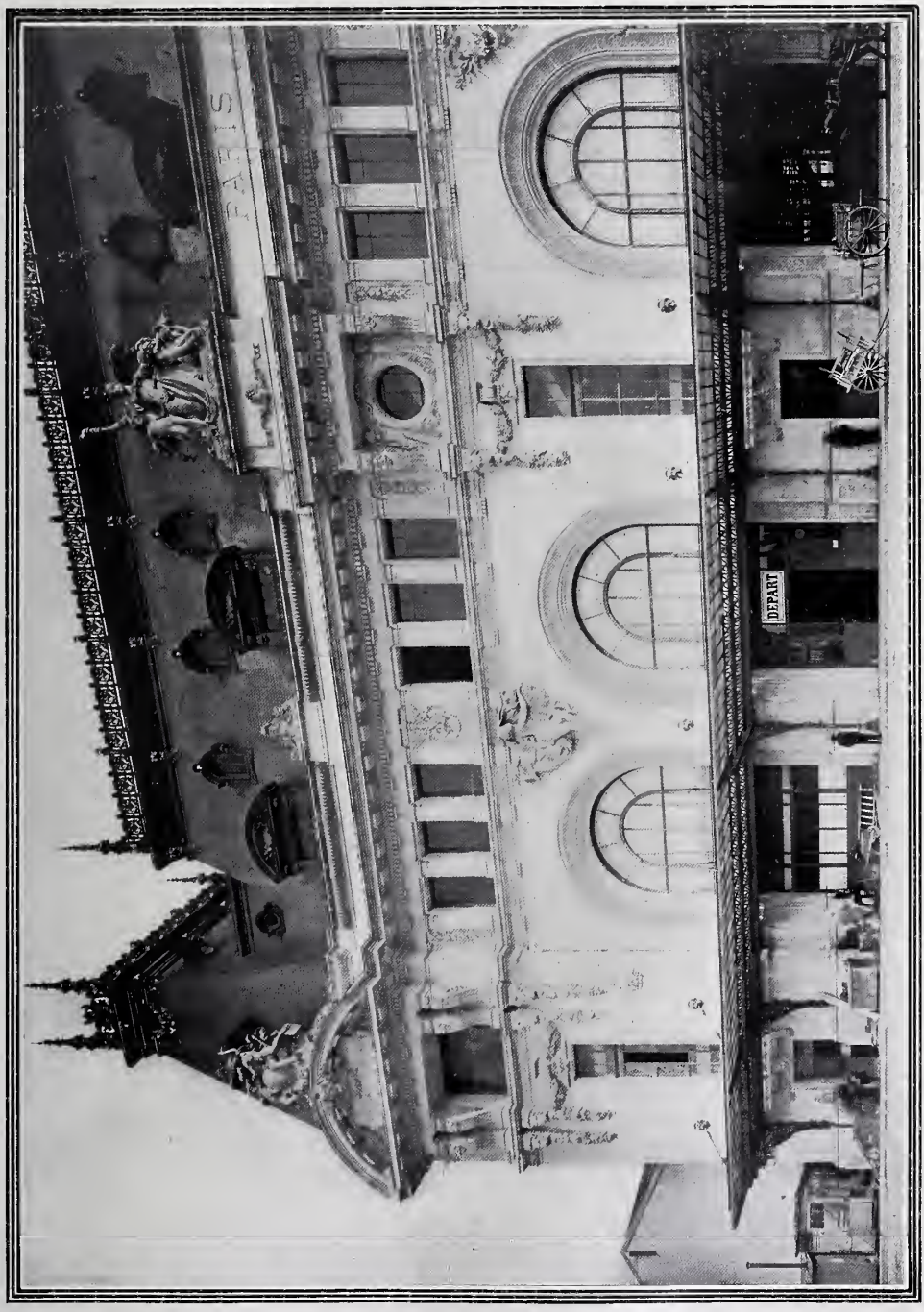
THE NEW TERMINUS OF THE "P.-L.-M." IN PARIS.

AS mentioned in one of our previous articles in the Architectural Record, railroad stations in the great capitals are no longer planned solely with an eye to utility, but to be, in addition, ornate, luxurious monuments that shall help to make the city beautiful. As regards Paris, the Northern and Western companies' stations, built about thirty years back, were, until a dozen years ago, the only ones possessing a monumental appearance. Then arose the new Gare Saint-Lazare, an edifice of elaborate architecture, a salient feature being a big hotel, standing apart from the station, but connected therewith by a covered passage. The Orleans Company's new station, the most recent of the Paris railroad termini, with the exception of the subject of this article, was described in the Architectural Record of October, 1901. It is a striking structure, from an architectural point of view, but it is still more remarkable for the ingenuity displayed in its internal arrangement, for its excellent facilities for dealing with baggage, etc.

The Paris, Lyons and Mediterranean Company (familiarly called the "P.-L.-M.") has been the last to bring its terminus up to date. In place of the old Gare de Lyon, which was too small and too cramped, there is now a station that provides adequate accommodation for the ever-increasing traffic of the road.

Although the Gare de Lyon is located at the extreme east end of Paris and in a poor district destitute of monuments, the company thought proper to give the new edifice a handsome appearance, and they have certainly succeeded in embellishing that neglected portion of the city.

It is evident that the question of placing the various divisions of the new station in the most convenient positions was thoroughly thought out. On the front, a view of which is here presented, there are the arrival and departure platforms of the suburban lines. These platforms are thus situated within a couple of minutes' walk of the little station of the Metropolitan Electric Railway, which is seen on the left of the photograph. Thanks to the "Métro," as the Parisians call their new urban railroad, the Gare de Lyon is within reach of workmen, clerks and others, who can now live



DETAIL OF THE MAIN FAÇADE.

DETAIL ON THE TOWER OF THE MAIN FAÇADE.

THE BUFFET OF THE NEW STATION.

in the eastern outskirts of the capital and still get to and from their work in the heart of the city in a reasonable time. The trip by the underground line from the Arc de Triomphe, at the western extremity of Paris, to the Gare de Lyon, only takes fifteen minutes.

Passengers traveling on the main line to Lyons, Marseilles and Italy start from the left side of the station, while on the right-hand side are situated the main arrival platforms, the custom house and the *octroi*. Here there is a large glass-covered hall where the cabs await the incoming trains. We must mention at this point that the passengers' baggage is still dealt with in the old slow way—that is, by hand.

As for the architecture, the façade is pierced with large bays surmounted by an attic. On the left there is a forepart and on the right a monumental tower. What lays itself open to criticism in this façade is the arrangement of pierced bays, which are simply an architectural *jeu*, instead of being "constructed" as are those of the Quai d'Orsay station. They are cut in two by a veranda, and the upper parts of the bays serve as windows to the immense refreshment room. The composition of the dormer windows in the roof is also a thing about which opinions may differ.

The detail photographs convey an idea of what the decoration is like. As in all contemporary French architectural works, it is at once very elaborate, very finished, and for the most part useless. We observe here a proof of sobriety on the architect's part for which we feel grateful. There are the customary Louis Seize festoons hitched to lions' muzzles, but, thank heaven, instead of running the whole length of the front they merely crown the narrow windows between the large bays.

It is true that between the bays themselves there are very large female figures seated in a most uncomfortable and most dangerous position. They cling desperately to the wall so as not to tumble down and crush the poor passengers in their fall. The objections we have to make concerning them are based on principle and common sense; they do not apply to the statues themselves, which are exceedingly well sculptured and would deserve commendation from the visitors and jurors at an Art Exposition. The question I ask myself is: "What business have these figures on this façade?" For an answer to this puzzle we must inquire at the *Ecole des Beaux-Arts*.

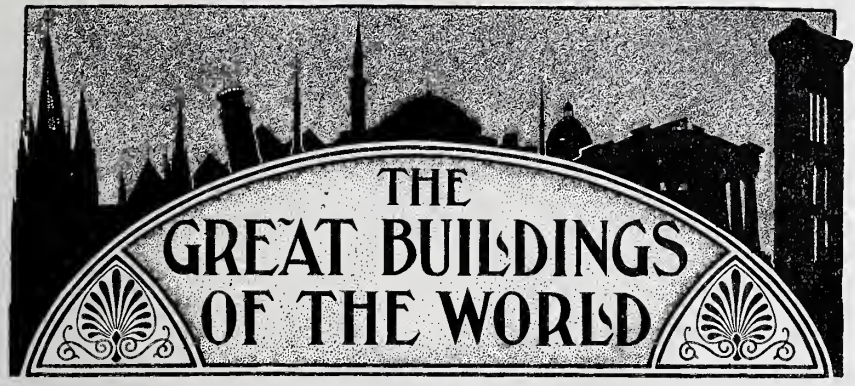
Groups just as fine and equally purposeless crown the segmented pediment—another inexplicable thing—on the forepart to the left, and then, from place to place, the broken cornice.

One of the detail views shows certain parts of the decorative sculpture on the left-hand tower. This decoration, which is very

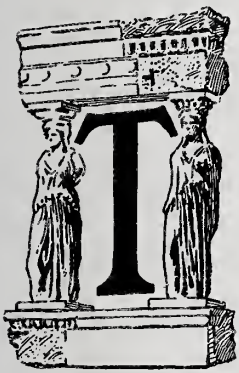
ably executed, is in turn rococo and Louis XVI., and the style of the tower itself is not less eclectic.

The *buffet*, on the first floor, is resplendent with the richest gilt and polychrome decoration. What we admire in this decoration is the idea of the panels, picturing the most renowned sites on the "P.-L.-M." road. The painting of these panels was entrusted to leading artists of the day. They hold out to the passenger as he discusses a steak before boarding the train an alluring promise of the pleasures he is journeying to seek, and illustrate in advance the book of travels which he will some day write.

THE PORTICO OF THE CARYATIDES ON THE SOUTH WALL OF THE ERECHTHEUM.



The Erechtheum.

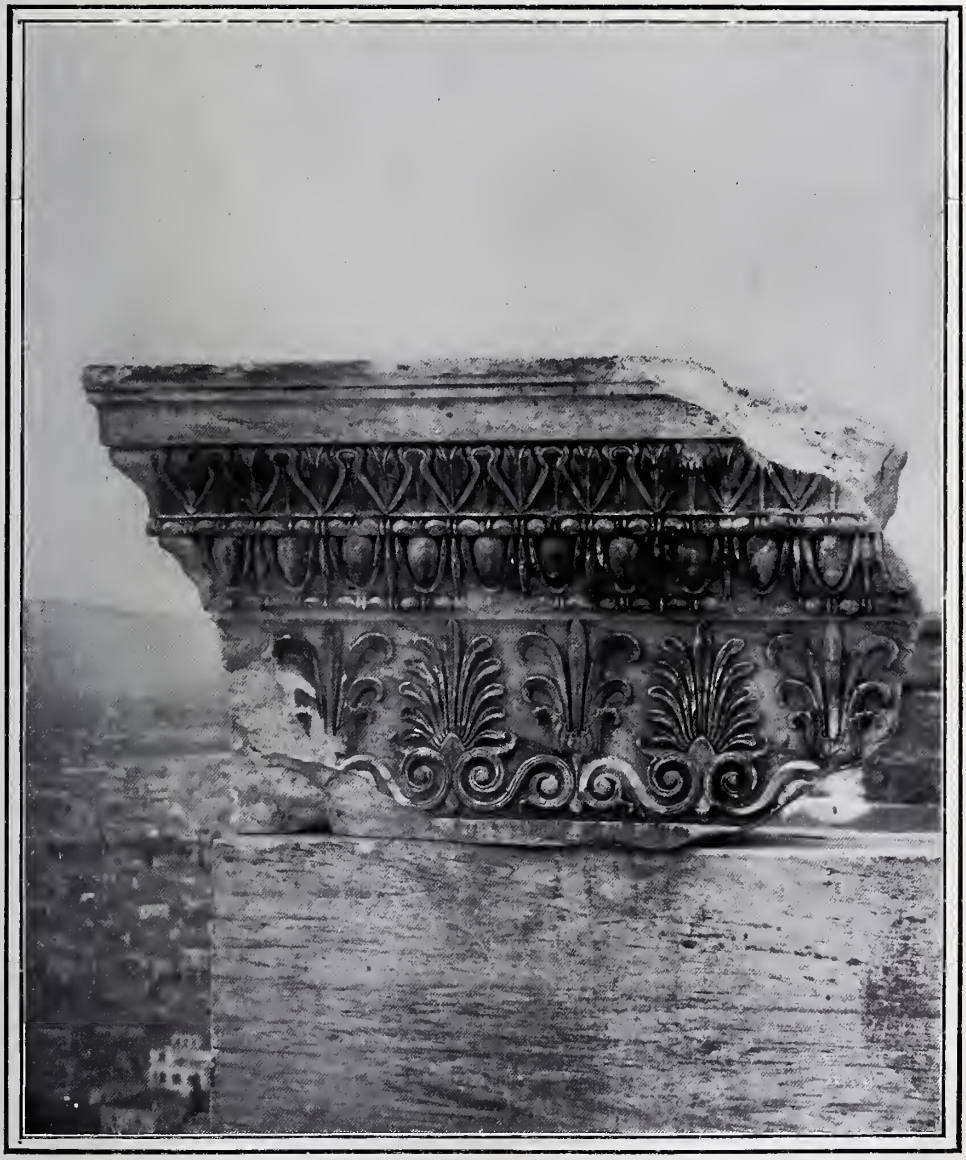


THE Erechtheum, the most beautiful example of a Greek temple of irregular form, is at first the most difficult to understand of all the structures of the Acropolis, except perhaps the Propylæa, because the remaining parts, although wonderful in themselves, do not fully indicate the form of the original building. It is probable that no one who has seen the Erechtheum has failed to admire certain of its details, but perhaps many have failed to conceive the complete temple or to solve the meaning of the present irregular masses; such buildings as the Parthenon are far more easily pictured in their original state from existing remains than is the Erechtheum with its complicated outline and its different levels.

To fully understand the existing works on the Acropolis would entail an immense and profound study of the causes of their foundation, the history of the times and of subsequent ages; but a mere superficial knowledge may stimulate a helpful appreciation of their true worth, and a bare outline of the chief causes most affecting them during a lifetime of more than two thousand years illustrates in a slight degree the vicissitudes through which they have passed. The present temples on the Acropolis would probably not have been erected, if the Persians had not, after the battle of Salamis, returned to Athens and destroyed the temples then existing. To the era of Pericles belongs the birth of the Erechtheum, as well as the other buildings left standing to-day on the Acropolis. After the decline of Athenian prosperity and in the time intervening between the Macedonian and the Roman

supremacy the city sustained three sieges of considerable severity. Though at that time it was man more than instruments of war that injured the buildings, yet it was a beginning and an early one. During the Roman supremacy Greek art on the whole suffered less than might have been expected; but the time soon came when reverence for buildings associated with names of ancient deities was lost and about 529 A. D. the temples were converted into churches. From then to the thirteenth century we may imagine constant changes of the interiors and a total neglect of all else. In 1427 the city first fell into the hands of the Turks, and upon being recovered was ruled by a succession of warlike dukes, falling again to the Turks in 1455. Nine years later the Venetians essayed to expel the Turks, and failing left them in possession for two centuries. At these times, although the citadel, the Acropolis, may not have suffered from actual bombardment to a great extent, the result was necessarily ruinous through the constant blocking up of the temples, their use for store-houses and the burning of the marble for lime. In 1687 the great blow fell. The Venetians again besieging the Acropolis gained temporary military success; but in so doing the Temple of Nike Apteros was completely ruined by the breaching battery directed against the Propylæa. All the buildings were much injured by bursting shells and towards the close of the siege, on September 26, a shell struck the powder magazine in the Parthenon, demolishing a great extent of the north and south walls and much of the sculptured portions, especially in the pediments. As if this were not sufficient, the Turks on re-entering their citadel completed the destruction by burning for lime great quantities of the fallen stone. Again in this century Athens was subjected to three sieges. The Turkish siege of 1826-7 caused much destruction and probably injured the Erechtheum at this late date more than all the preceding centuries of wars. It was not until after 1863 that peace seemed secured for the people, whose temples for so many hundred years endured the ravages of time, the mutilations of Christian zeal and barbarian greed, and the violence of constant internal strifes and foreign wars. Especially it should be remembered that with the exception of the great disaster of September, 1687, unchronicled deeds of violence have wrought probably as much, perhaps more, ruin within these walls as those recorded in history.

Many ancient authors refer to the Erechtheum, Pausanias in particular, but the best and an indisputable authority as to the condition of the temple in 409 B. C. is an Athenian inscription on marble now in the British Museum. This inscription states at some length the condition of the building at that date, and the



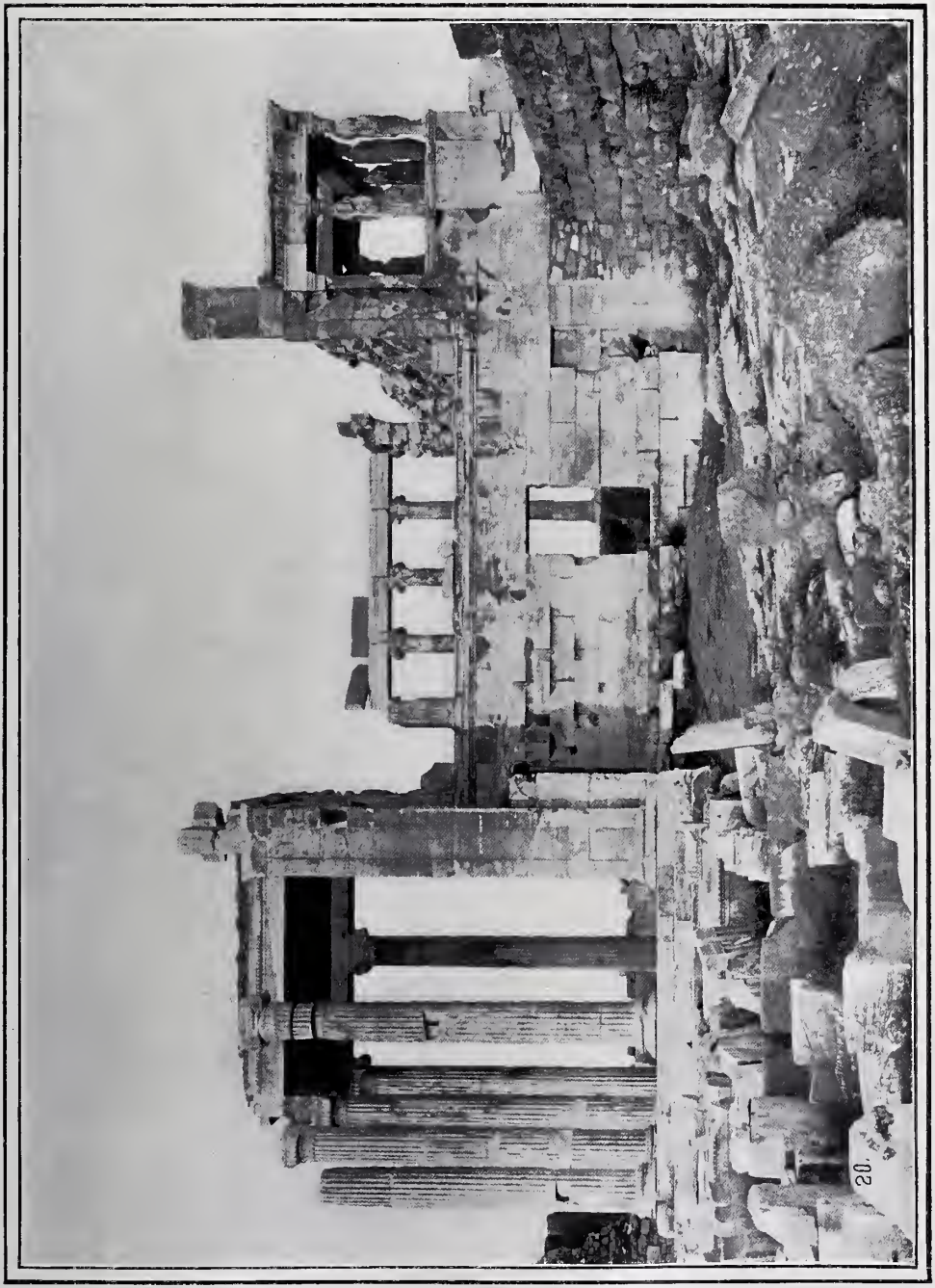
FRAGMENT OF THE CORNICE ABOVE THE PORTICO OF THE CARYATIDES.

amount of work to be completed. Briefly, it seems that the temple was practically completed to the cornice, and beyond that the tympana of the three pediments with a portion of the inclined mouldings were in place. Besides the inscription just mentioned five other fragments have been found referring to money paid on the works of the Erechtheum. One dated 408 B. C. states the sum paid for parts of the frieze.

With all the information derived from these sources one is able, in conjunction with the present building, to conceive with sufficient exactness the temple as it stood about four hundred years before Christ. Many minute details necessarily considered by the archæologist, of course, remain undetermined, but the general appearance may be readily imagined, even without the additional testimony we have from modern travelers, dating as far back as before the Venetian bombardment.

The Erechtheum, aside from its projecting side porticos, was a rectangular building, starting (except a small portion later referred to) from two different levels, but attaining a uniform level throughout at the height of the cornice, which was continuous around the four sides. A pediment rose at each end, east and west, and a marble tiled roof probably extended between the two with the ridge at about the same level as the top of the pediments. The portico on the north side had a pediment; but the ridge of its roof fell below the cornice of the main building. The portico of the Caryatides was in general as now seen, except that an upper member of egg and dart, with interspaced lions' heads, originally crowned the cornice. Sculptured figures of white marble in full relief were placed against the dark frieze of Eleusinian stone, which was the only color differing from the white marble on the exterior walls of the temple, for no colors were used as on the Parthenon, except in the ceilings of the porticos. The west wall was built with engaged columns reaching from the high base to the cornice, and had originally no windows. The level, lower by about ten feet to the north and west than elsewhere, was reached by broad steps at the northeast end in the same position as the present ones, and it is probable that there was a small garden at the west end in two levels, as described later.

The simplest explanation of the interior is that it formed two temples, the eastern part that of Athena Polias upon the supposed site of her contest with Poseidon, while the western part, the Pandroseum, was of a much lower level and dedicated to Athena Pandrosos. The building thus contained distinct temples under one roof, and on account of the complicated formation of the Acropolis at this point great irregularity of plan was found necessary and easily permitted by the different dedications of its parts;



THE WEST WALL OF THE ERECHTHEUM.

it seems to have been called Erechtheum because of the tradition that Erechtheus was buried on the site.

The Erechtheum now stands in ruins, its roof gone for ages, its pediments destroyed, its walls to a great extent fallen, its portico ceilings and columns broken and defaced, and its frieze lost; it is fortunate that it was portrayed, although at a sadly late date, before this destruction was quite complete, and it is especially fortunate that the portions left to us are in reality the vital parts and the most beautiful. In 1675, Sir George Wheeler visited the Acropolis and found the Erechtheum used for the seraglio of a Turk, for which reason he was not allowed to enter. It was the year preceding that Jacques Carrey made his drawings of the Parthenon sculptures, but they seem to have allowed him no time for other work, and for nearly a century, until Stuart's visit in 1751, there is a lamentable lack of trustworthy information. Stuart found the Acropolis garrisoned by the Turks and the Erechtheum in a ruinous condition, with its roof gone and no internal walls, and the interior a confusion of fallen blocks. The portico of the Caryatides had suffered the least, although one of the figures had fallen, the entablature and flat ceiling were intact. The northern portico was walled up between the columns with rubble and converted into a magazine of military stores, and most of the pediment was destroyed. The west wall was found standing nearly intact, and it was also found thus by Inwood and later by Penrose. It seems curious that this west wall should have been so well preserved for ages only to fall as recently as October, 1852, when it was overthrown by a severe storm.

Of the east wall we have no very good record. The large doorway that must have occurred in it and the central portion of the wall itself appears to have fallen before, perhaps long before, Stuart's time. The north and south walls, which are of greater extent, suffered much in the wars of 1822-27, but were in part restored in 1838 with the old stones.

Aside from the pleasure derived from a study of the portions of the Erechtheum as they are now found, exhibiting as they do the most varied, the most perfect and most beautiful architectural forms and decoration to be found in any single structure of antiquity, it is necessary to consider some of the main characteristics of the present structure in connection with its past.

An examination of the fragments of the west wall, which stood above the base course still remaining, proves that the fallen portion of the wall is of about the fourth century A. D., so that the wall as in general seen by Stuart and others, and as portrayed by them, is probably a reconstruction which took place when the temple was converted into a church. The Athenian in-

COLUMN AND PEDIMENT OF THE NORTH PORTICO OF THE ERECHTHEUM.

scription mentions no windows and the attached columns which are referred to are those of which the bases remain, which are of the original workmanship. Judging from traces on the wall and from the manner in which the string courses are cut off squares, and the channel in the antæ, it is apparent that some structure was originally built against that portion of the wall, and the arrangement and traces of the steps indicate two levels at that end, probably a small court or garden.

Considering the general condition of the south wall, it appears especially fortunate that, as some part had to suffer, it should have been chiefly the expanse of plain wall rather than the portico of the Caryatides. From many indications, the chief of which are that the stones of this portico are merely let into the main wall of the temple, and except one stone of the west side form no integral part of it, a method quite contrary to usual Greek work, it is believed that this portico was not part of the original design, but was the immediate substitute of some more simple structure, yet of a date nearly or quite corresponding to the rest of the work.

Of the six Caryatides five remain in their original position. The second one from the southwest corner, removed by Lord Elgin and sent to England in 1812, and later acquired by the British Museum, is now replaced by a copy in terra cotta. The inner Caryatid on the east side of the portico is the one that was missing at the time of Stuart's visit, but it was later set up and somewhat restored.

These figures being substitutes for columns were treated with great simplicity, the posture being varied only in that the three figures to the west rest on the right and the others on the left leg.

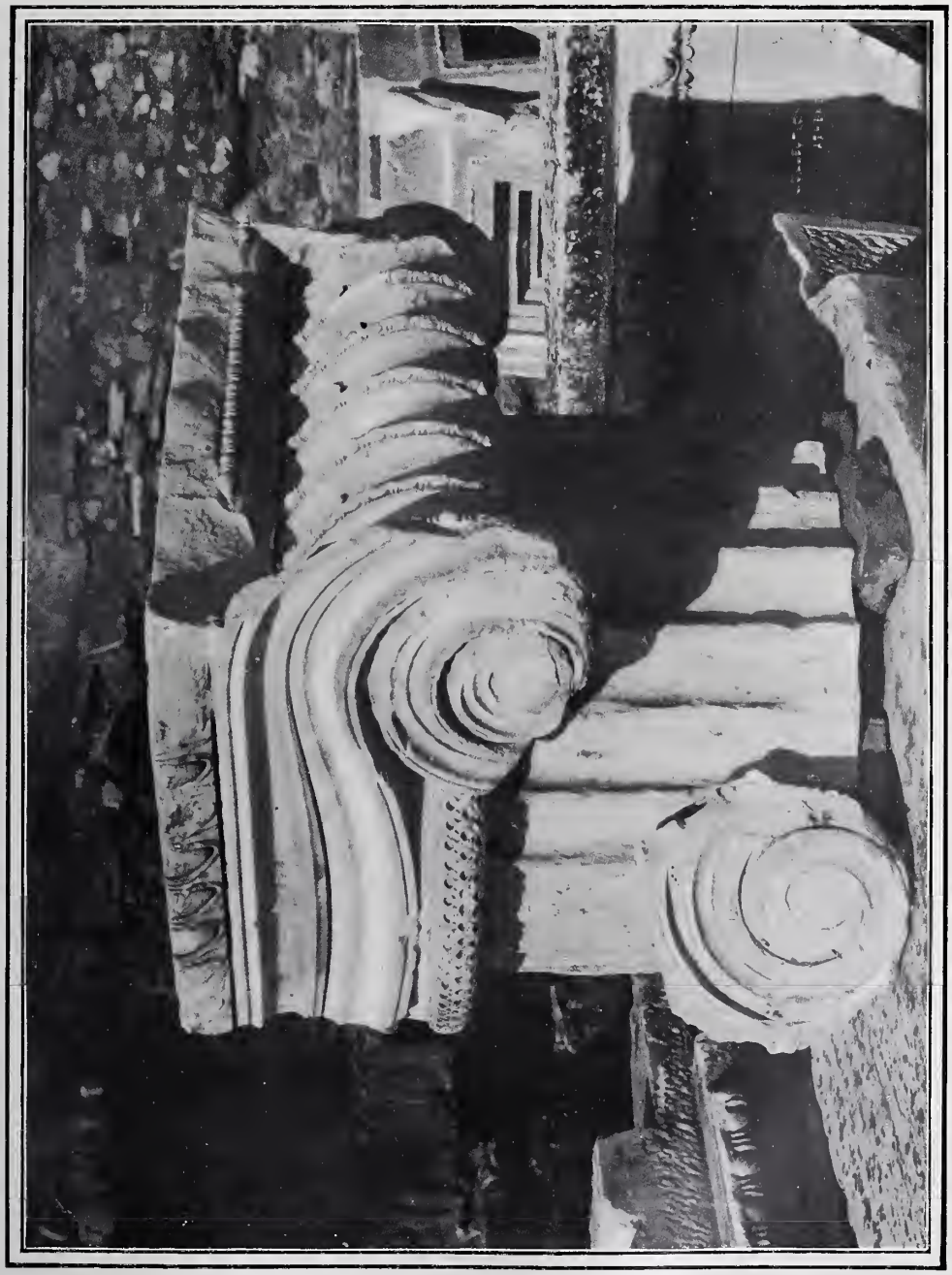
That the position of the hands and arms may have slightly differed is probable, but unfortunately none now remain whole, all being broken somewhat above the elbow. Although the faces are marred and the long tresses which fell on the shoulders are broken, the beautiful contour of the head, with the masses of hair drawn back from the brow, leads with a gentle blending to the capital which intervenes between the figure and its great burden. The folds of the diploidion concentrated in depth of shadow between the breasts give an effect of strength on a central axis, and below the drapery falls directly to the base, giving a powerful vertical quality in the lines! These figures are classed with the best sculptures; but there are parts executed with much less exactness than would have been found during the height of Pheidian purity. The cornice over the Caryatides, fairly preserved in parts, is badly worn away at the top, and excepting a small fragment on the northwest end the upper cyonatium, carved in egg and dart

THE GREAT DOORWAY OF THE NORTHERN PORTICO OF THE ERECHTHEUM.

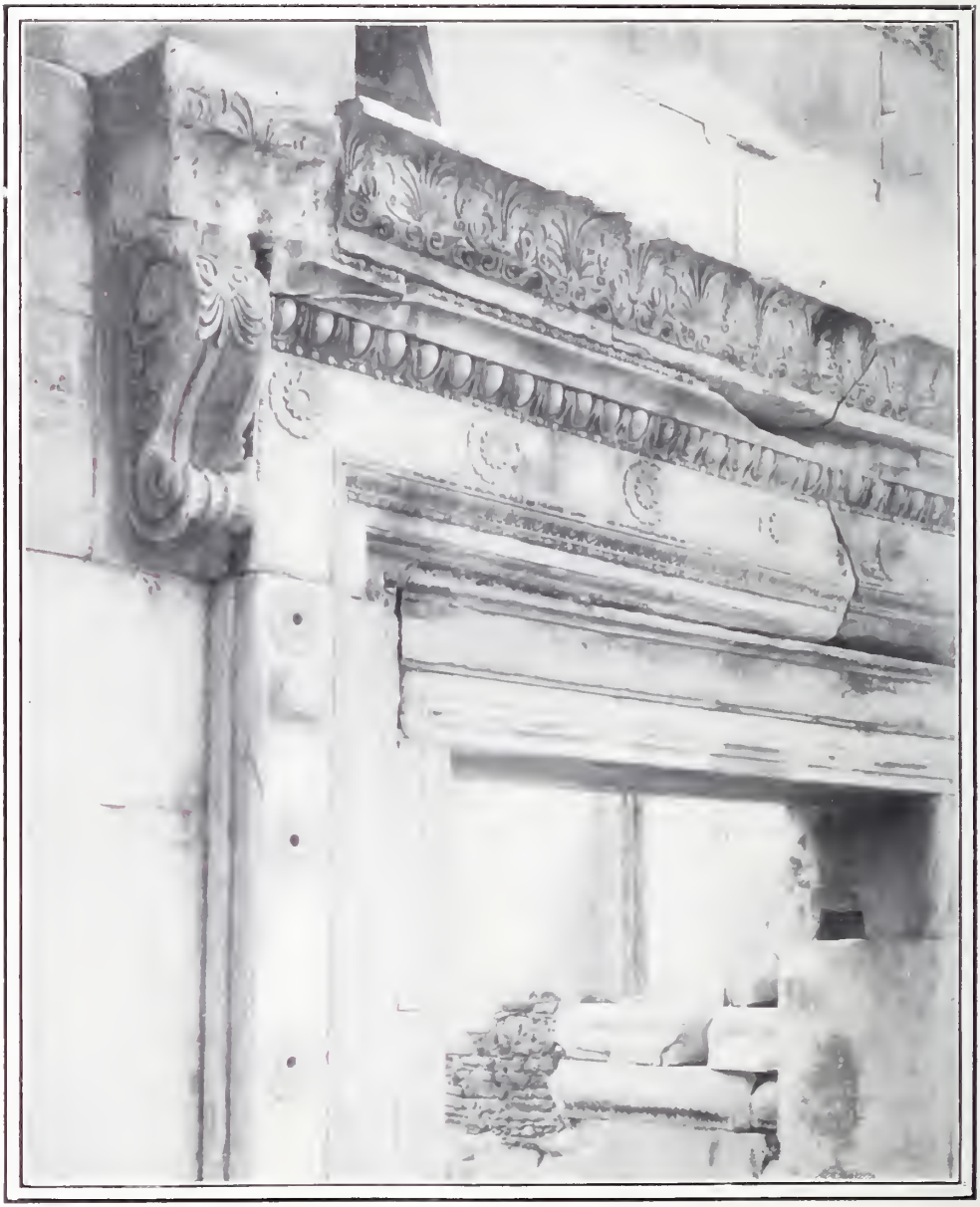
and interspersed with lions' heads, traces of which are discernible, is entirely gone. A large section of the flat panneled ceiling has fallen. The entrance to the portico is a small opening cut through the podium; the level of the floor inside being a trifle higher than the upper step, a short steep stairway, traces of which remain, led down to the door giving access to the western section of the temple.

On the north side of the Erechtheum the level is about ten feet lower than on the south; the portico on this side, the most perfect work imaginable, so long used by the Turks as a magazine for military stores, was finally freed from the screen walls in 1846.

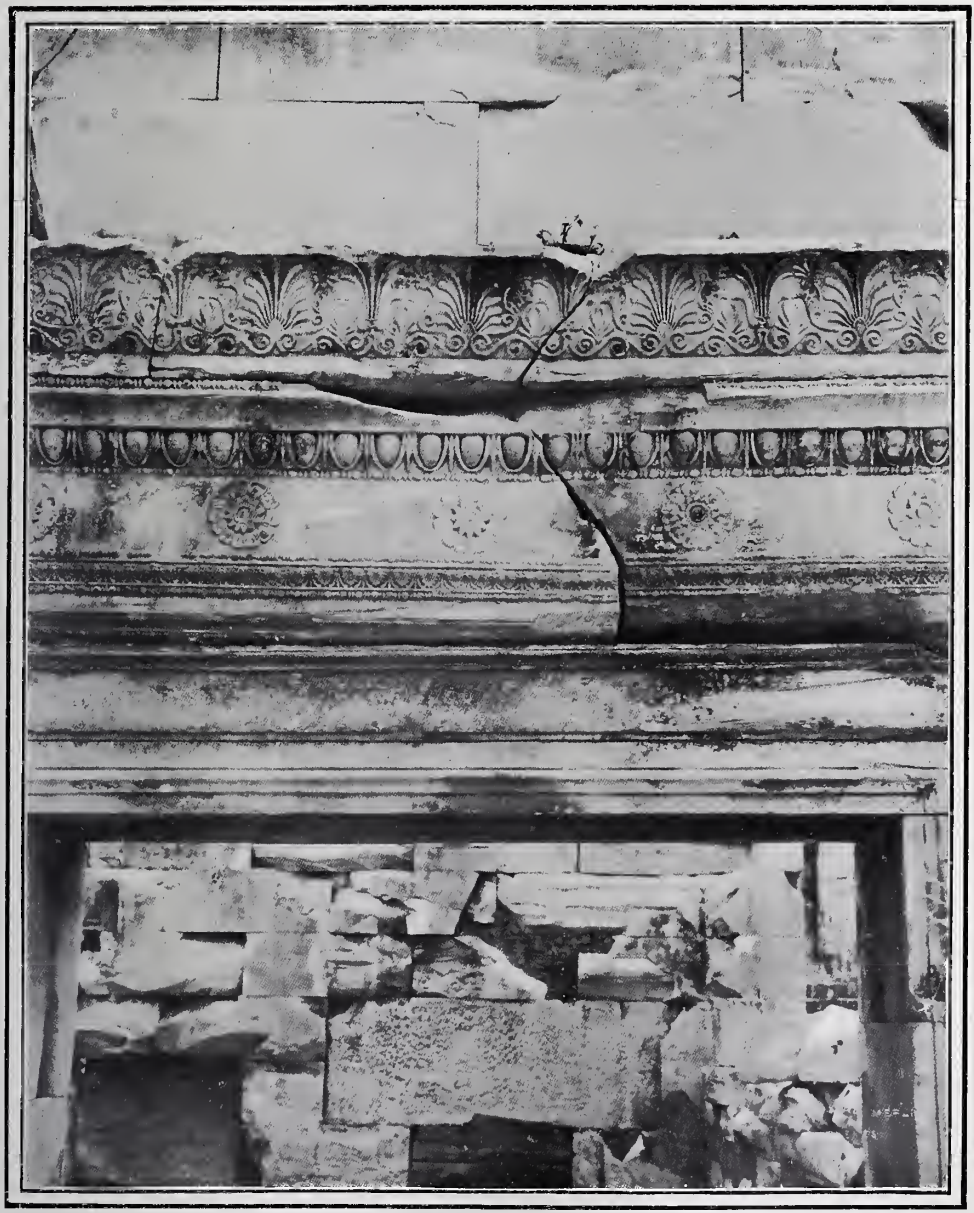
It is here that the effect of the high Greek steps becomes very apparent. That the steps were proportioned for architectural purposes and not for ease of ascent is certain, and by them the lines of the cornice are admirably counterbalanced and the effect of the columns greatly increased. No curve such as exists in the Parthenon has been observed in these steps. The intercolumniation of this portico is the widest allowed to stone temples, a peculiarity being that the central interval is less than the outer. In connection with the difference of spacing in the columns of this and the eastern portico the vast difference in the proportion of the columns themselves should be noticed. The entasis of the columns of the northern portico is one of the most delicate curves ever applied to a structural form. The axis of the columns are not perpendicular; but incline inwards at a uniform angle, and the corner columns, as in other Greek temples of the best period, have a slightly greater diameter than the others. The capitals of these columns form the most beautiful example of decorated Ionic capitals found in Greece; although all are now somewhat destroyed sufficient remains to show their perfection in form and detail. Beside the spirals of the volute runs a deep square sinkage, from which metal fastenings or traces of them show in every capital; and it is more than probable that these square sunk spirals were filled with strips of bronze and that the central eye contained a rosette of the same metal. It will be noticed that over the egg and dart the circles of the platted band are cut very deep. These were filled with colored stones. The columns although much defaced are standing entire, except the one at the northwest angle: the upper part of its capital and a fragment of the volute are on a stone near the portico, and a small portion of its necking is in the Museum on the Acropolis. Much of the entablature that is not in position lies scattered about on the ground near the portico, and many of the best examples of the carved ornament may there be examined. The plain frieze is of dark Eleusinian stone, and the remaining fragments show numerous sinkages and metal dowels irregularly placed to support the figured frieze. The figures sup-



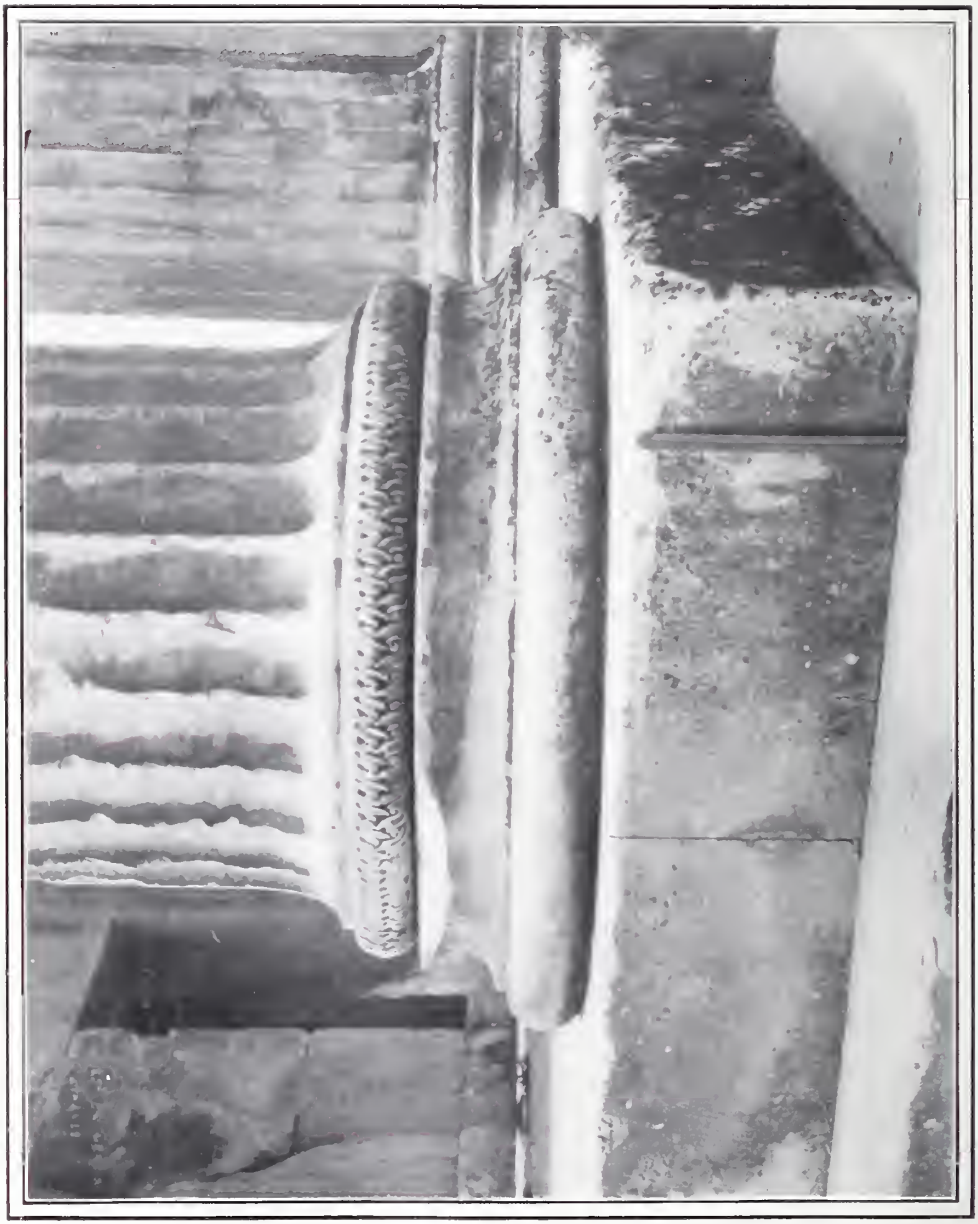
FRAGMENT OF A CAPITAL OF A COLUMN ON THE NORTH PORTICO.



DETAILS OF THE GREAT DOORWAY OF THE NORTH PORTICO OF THE ERECHTHEUM.



MOULDING OF THE GREAT DOORWAY OF NORTH PORTICO.



BASE OF A COLUMN OF THE NORTH PORTICO.

ported by these metals were sculptured in white marble. All the fragments now remaining are in the Museum on the Acropolis, and consist of only forty-eight small and broken pieces.

Amongst the fallen masses near the portico is a stone which appears to have formed the central block of the tympana. The angle is 14° 5′ 6″. All but a small fragment of the inclined corona and cymatium is missing. This fragment may be seen in the Museum on the Acropolis. Its workmanship is very fine, but the piece unfortunately small.

The flat ceiling of this portico was mostly destroyed by the siege of 1826, but one entire section remains in place; many of the minor parts are scattered about on the adjoining ground. The plain mouldings show traces of color, and the center of each panel appears to have been filled with a bronze ornament. The only painting used on the exterior of the Erechtheum appears on the ceilings of the porticos—a decorated egg and dart on the plain mouldings and a Greek fret on the flat soffit outlined between the lines of beading.

The great doorway of the northern portico, although mutilated and somewhat reconstructed by the insertion of jamb linings, still shows its extraordinary beauty of proportion and detail. The small plain doorway near it originally led to the enclosed court before referred to on the west side of the Erechtheum. Below the pavement of this portico may be seen the rock struck by Poseidon.

Of the six columns of the eastern portico, five remain in position, the other one being in the British Museum, having been sent to England in 1812 by Lord Elgin. The ceiling and entablature is much more damaged than on the north, and the detail is simpler and not always so perfect. The stone forming the pediments at the east and west ends appear to have been destroyed. That the pediments were nearly completed in 409 B. C. is shown by the Athenian inscription before referred to. Marble roof tiles and acroteria have been found in considerable quantity, but, although some are of exceptional form, the workmanship does not indicate that they are contemporary with the original work of the Erechtheum.

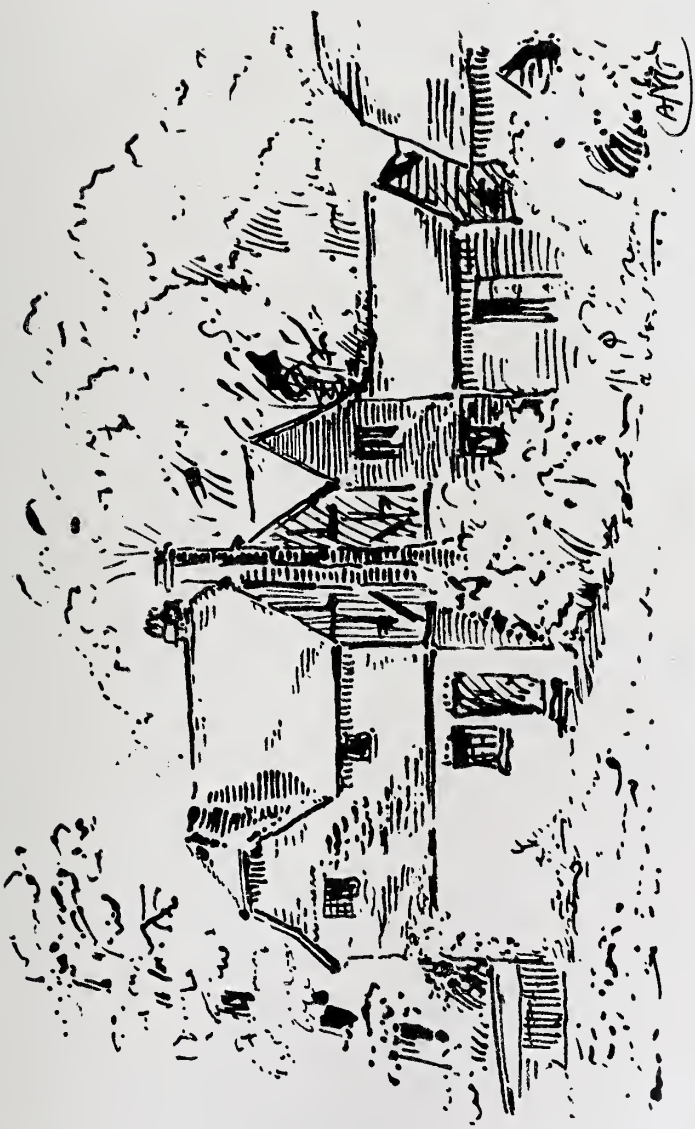
Edwards Gale.

ENGLISH FARMSTEADS.

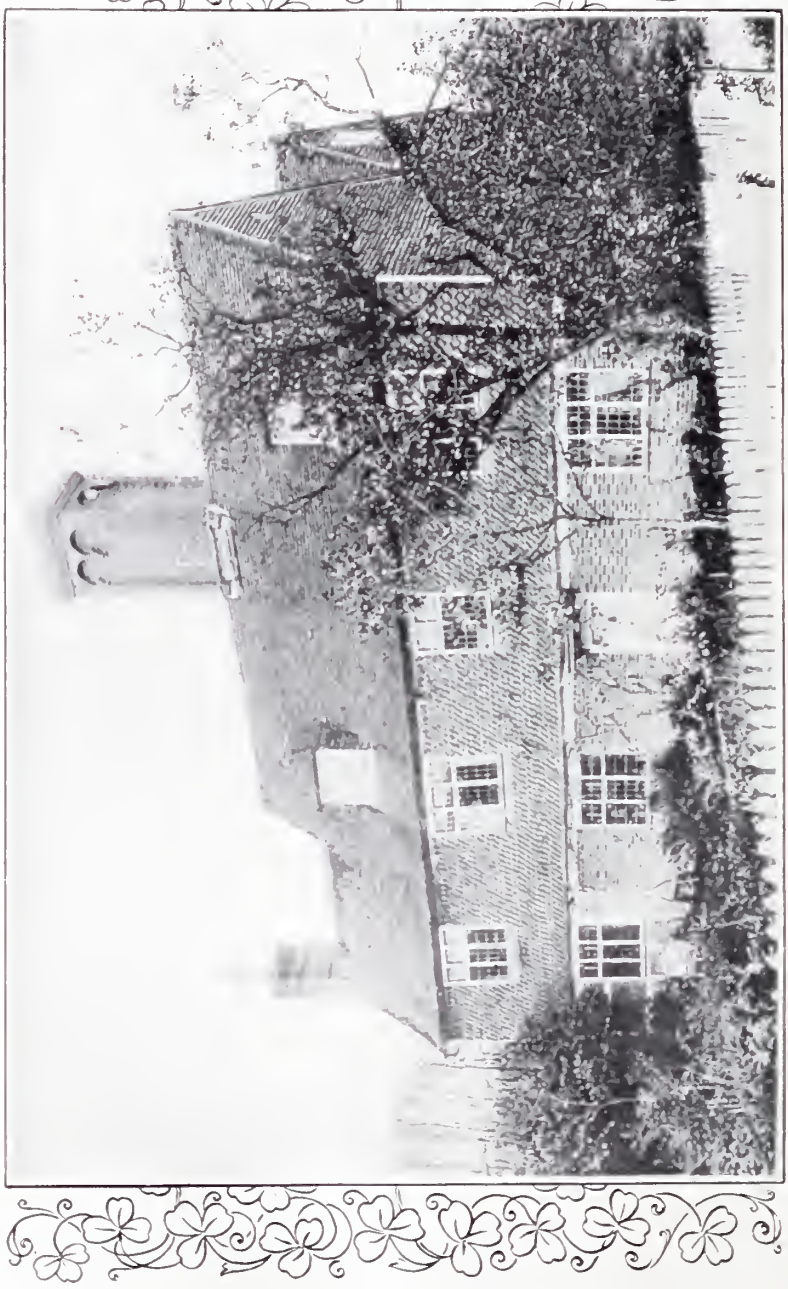
IN spite of England's vast mineral resources, and of these having been discovered and exploited in very early times, it has always been, as it still is, largely an agricultural country, while for at least several centuries farming was its most important industry. It is consequently by no means surprising to find that the English farm of the present day is, as a general rule, far from being a scientifically organized institution. Its principal characteristics are cosiness, comfort, picturesqueness, and all the other qualities which go to make up homeliness. Exceptions are to be found, where farms have been drastically taken in hand and entirely remodelled upon modern lines, with modern appliances and machinery, possibly to the advantage of the owner's pocket, certainly to the destruction of the halo of romance which is attached to the older edifice.

It may appear to some people to be mere foolish sentiment which will retain a farm building and its surroundings, generation after generation, in practically the same condition, in the face of modern competition; but sentiment plays a large part in human affairs, and it is by no means difficult to understand that it would be a severe wrench to many a man to pull down that which has served his father and his grandfather well, even if it be demonstrated to him that it does not meet the needs of the present day. He does not mind adding a new building here or there as may be required; but he will not destroy. This, the present sentiment, has been the sentiment, in the majority of instances, in the same family owning the same farm for many hundreds of years in succession. And thus the typical English farm has grown. The house, or at least a portion of it, usually bears evidence of great age, and has, likely enough, been added to from time to time, while the outbuildings are of all dates, grouped around with little regard to symmetry or evidence of preconceived plan, being each placed just where the caprice or immediate convenience of the builder dictated.

Where any considerable alterations have been made, it will frequently be found that their date agrees with a change of ownership; and these changes are remarkably rare. Owing to the way in which manor rolls have been kept, it is often possible to trace the successive occupiers of a given farm for many centuries, and even occasionally right back to the marvellous Domesday survey of the eleventh century; and changes of surname are comparatively rare, and then frequently are due to succession in the female line rather than to the passing of ownership to another family. The following list of the owners of Hendal in Sussex may be taken as typical, sev-



TYPICAL ENGLISH FARM NEAR GODALMING.



SWIGGSHOLE FARMHOUSE, HORSMONDEN, KENT.

(This and the following half-tone illustrations are taken from "Old Cottages and Farmhouses in Kent and Sussex.")

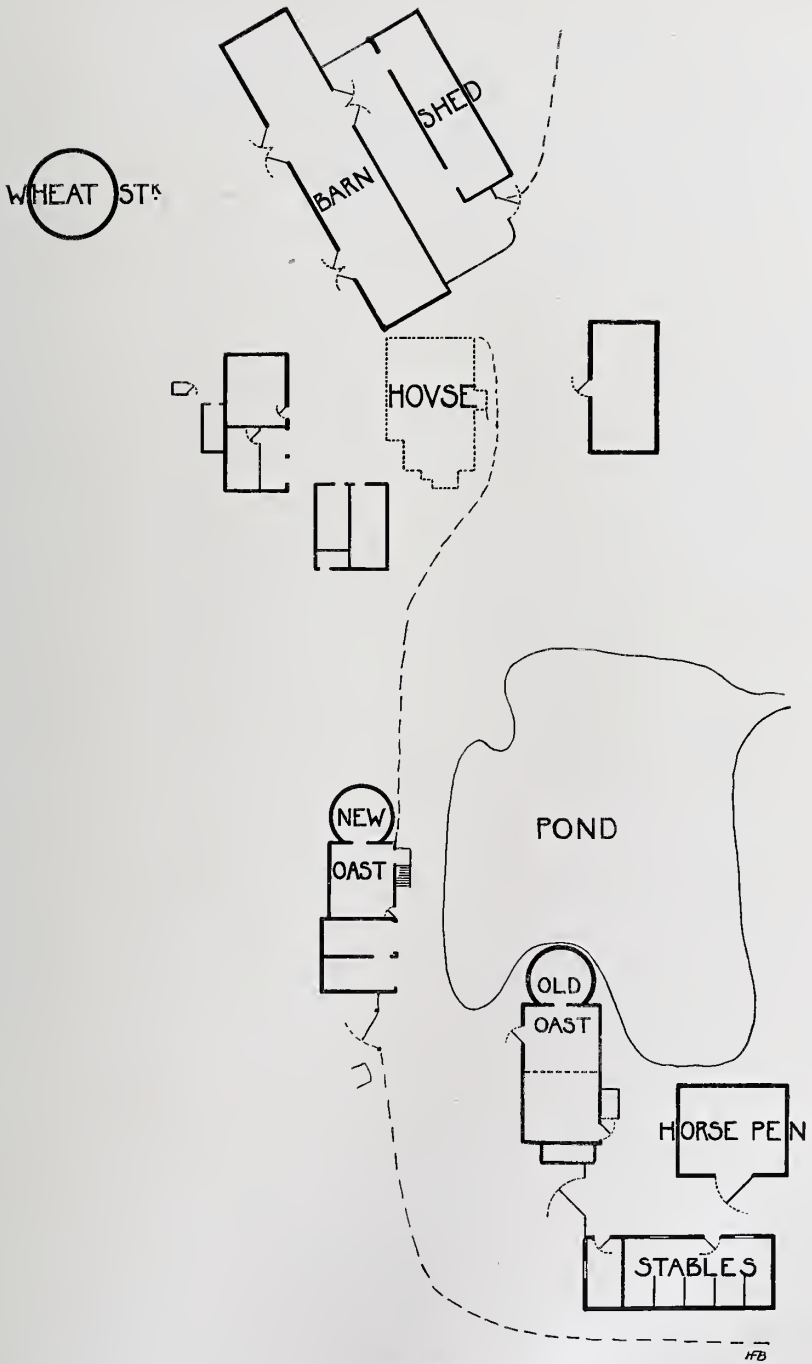


FIG. 1.—PLAN OF THE HENDAL FARM, KENT.

eral such, much more complete and lengthy, being before the writer at the present moment:

1265. Thomas de Yndedale.
1296. William de Hyndedale.
1327. Thomas de Hyndale.
1593. Bartholomew Constable.
1714. William Constable.
1724. Robert Avis.
1742. William Avis.
1775. William Avis, Jr.
1825. Peter Avis, a portion of Hendal Farm.
1827. Obadiah Hall.
1866. John Hall, present tenant.

It will be noticed that in this, as in many other instances, the present name of the farm can be traced to the name of a former owner—the last of which name, in this case, died more than six hundred years ago!

For a plan of Hendal Farm, bearing out what has been said, the various buildings being grouped around the pond in picturesque confusion, and with apparently the maximum of inconvenience, see Fig. 1.

Sherlock's Farm, at Withyham, of which a plan is also given, is similarly named after a Richard Sherlock who lived there several centuries ago. But this is traditional only, the following being the comparatively short authentic list of occupiers:

1693. Thomas Twine.
1714. Edward Crunderell.
1755. Thomas Waghorne.
1796. John Hall.
1800. Thomas Hall.
1836. Widow Hall.
1838. William Burfoot.
Christopher Burfoot.
1876. William Goodwin.

This is likewise a scattered farmstead, with stables and cowsheds on the opposite side of the approach road to the house, and with the peculiarly unsanitary arrangement of oast (or malting) under the same roof as the stable.

To the artist these old English farmsteads are a source of pure delight. Surrounded with foliage, built of local stone or a warm red brick, frequently with the upper stories of half-timber work or tile-hanging, almost invariably having red tile roofs or possibly thatch, and with outbuildings frequently of tarred weather boarding, they form most perfect color pictures. Of architectural character or style, in the higher sense, they rarely possess any, depend-

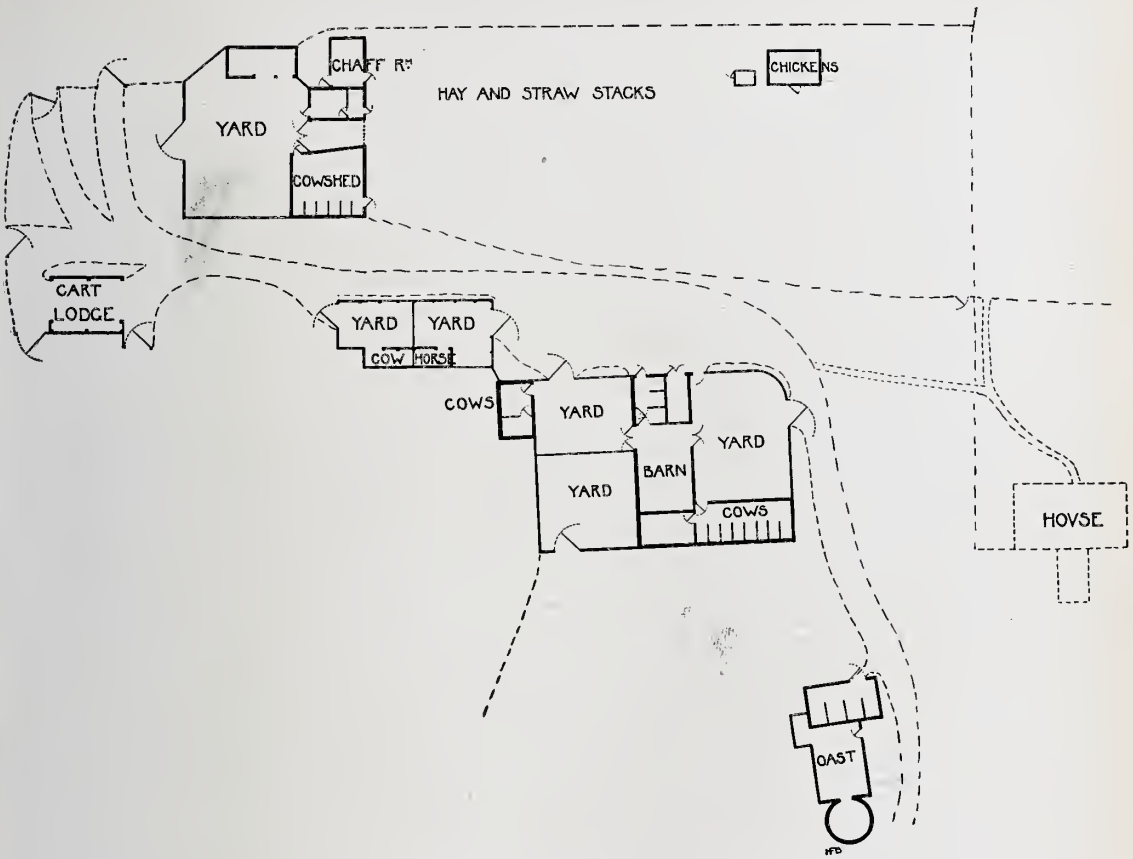
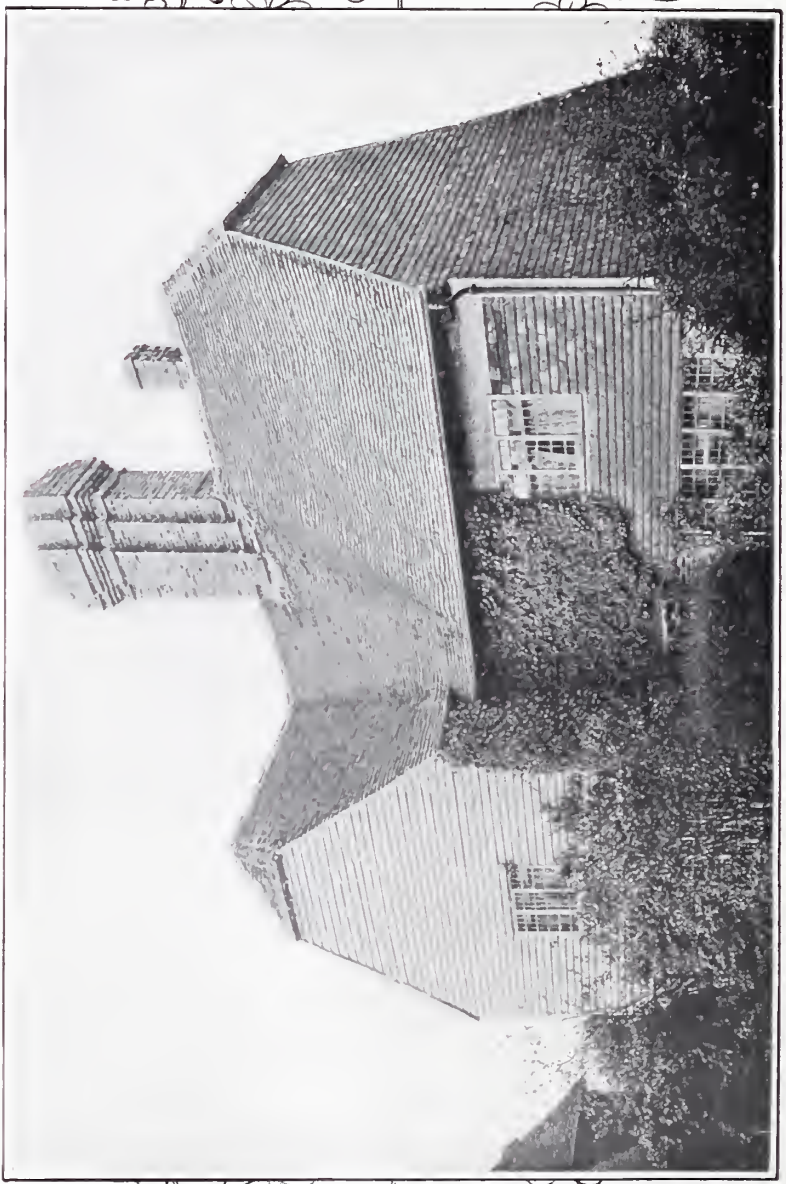


FIG. 2.—SHERLOCK'S FARM, WITHYHAM, KENT.

ing for their charm upon their coloring, their broken outline, and the effect of time.

Alksford is somewhat more formal in arrangement, the block containing cow house, stables and cowshed being modern, and the whole steading being compact and easily controlled from the house. This last, however, is a simple weather-boarded structure dating back to about the year 1600 A. D., though the following roll of owners does not extend so far:

1714. Nathaniel Turner.
1739. Widow Turner.
1742. Philip Turner.
1782. Widow Turner.
1784. Philip Turner.
1791. John Luck.
1796. Susanna Luck.
1803. James Patching.



COLLINS FARM, SISSINGHURST, KENT.

1838. Thomas Patching.
1891. Edward Bates (present owner).

Ford Place dates back to 1537 and was for a long time the Manor House for Lord de l'Isle and Dudley, whose mansion is situated about a mile distant, and the first floor of the present oast house was for more than a hundred years used as a ballroom. In this steading again the arrangement is compact, and almost perfect in its planning upon a system of two rectangular yards onto which the

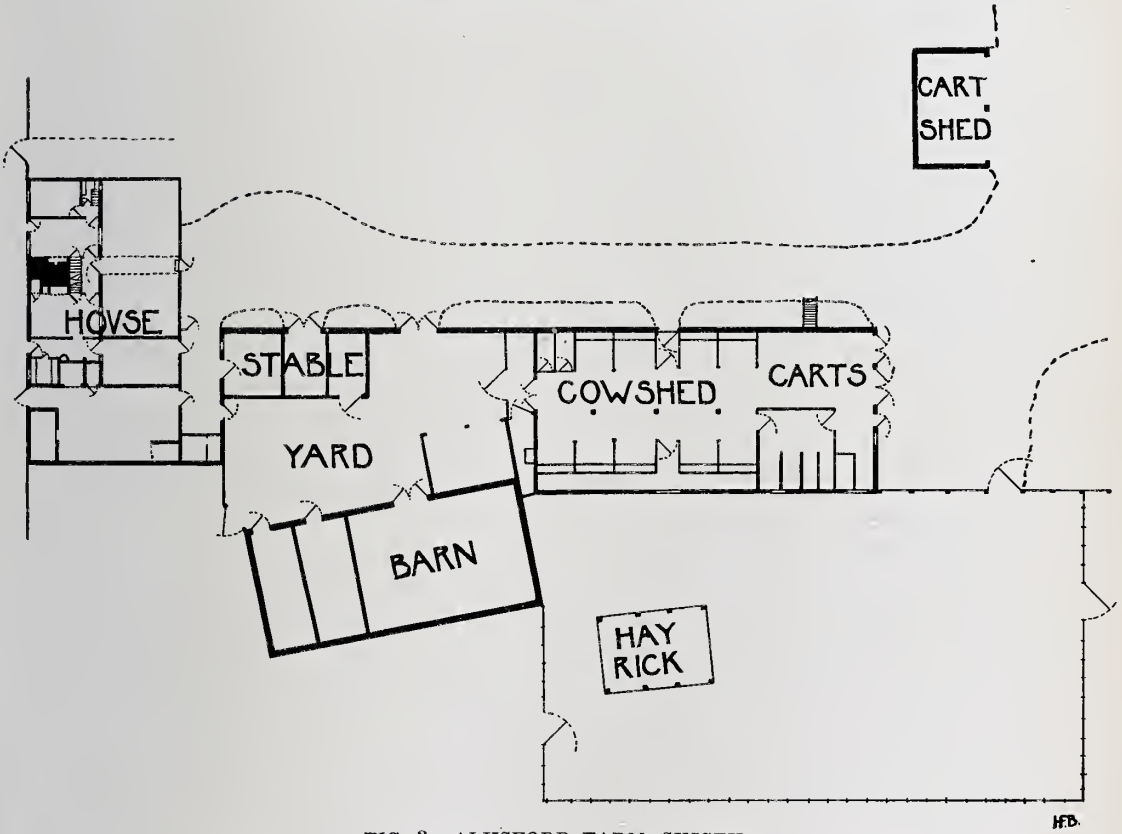
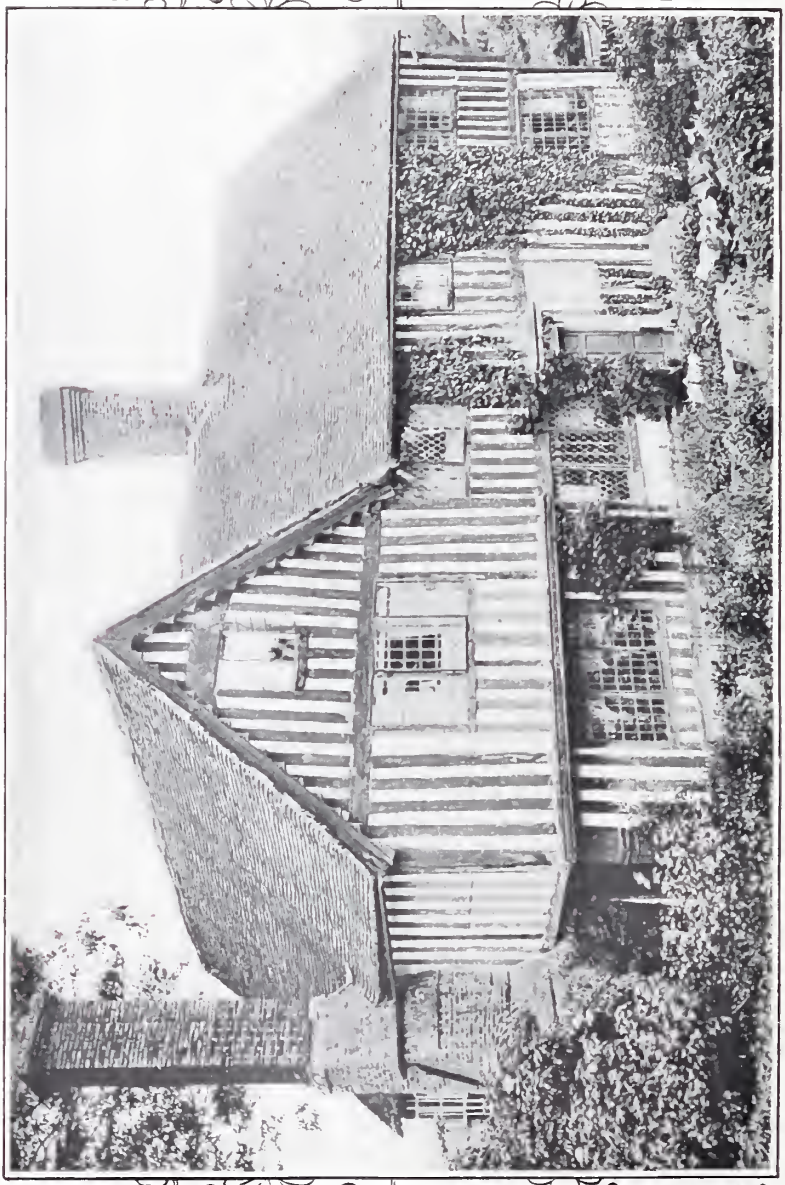


FIG. 3.—ALKSFORD FARM, SUSSEX.

cowsheds and stables respectively open. Needless to say, this is all modern.

The Manor Farm at Bidborough in Kent is not yet a hundred years old—a modern farm, as such things go in England. It is small and compact, with visitors' and farm entrances to the house quite distinct.

The farm at Bidborough, of which a photograph is given, is an entirely different structure, in half-timber, with an overhanging upper story, and an entire absence of diagonal timbers—a most



STREAM FARM, SEDLESCOMBE, SUSSEX.

unusual thing. The building as it stands is a modern restoration, but the details of the older house have been followed with tolerable faithfulness, down to the 16th century doorway and the carved barge board.

Farms of entirely modern construction are most commonly of

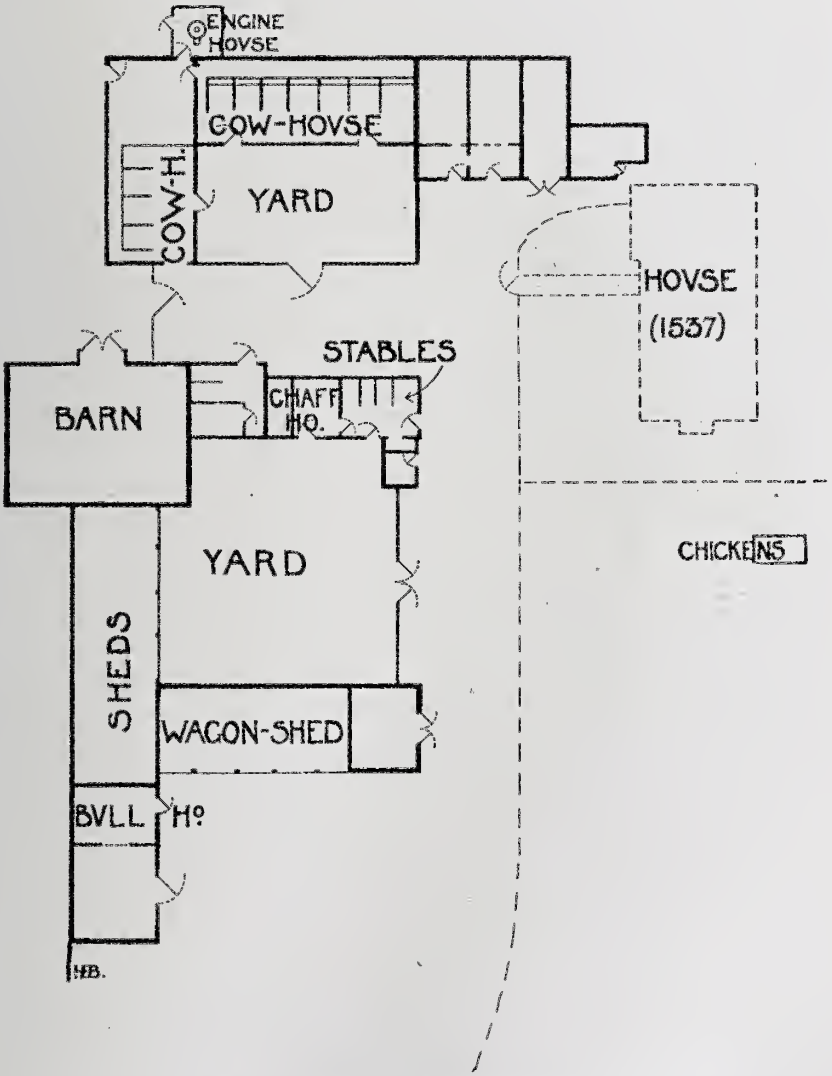
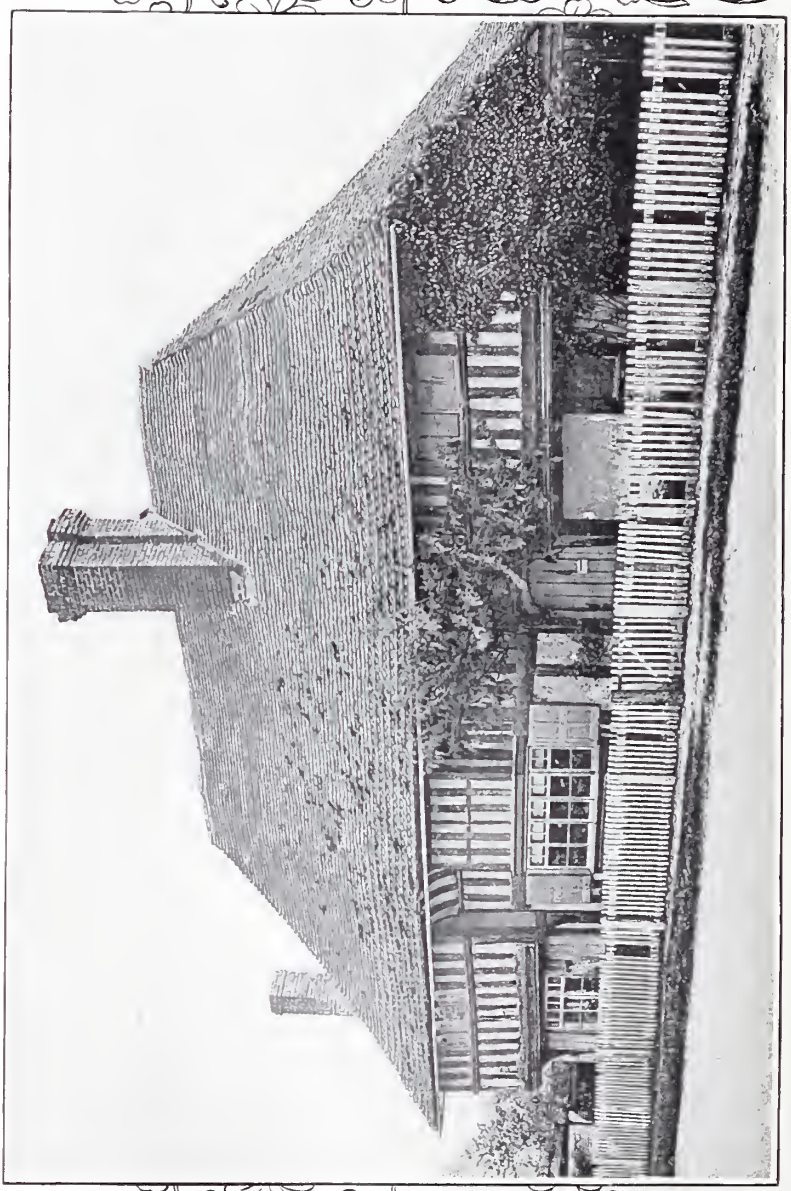
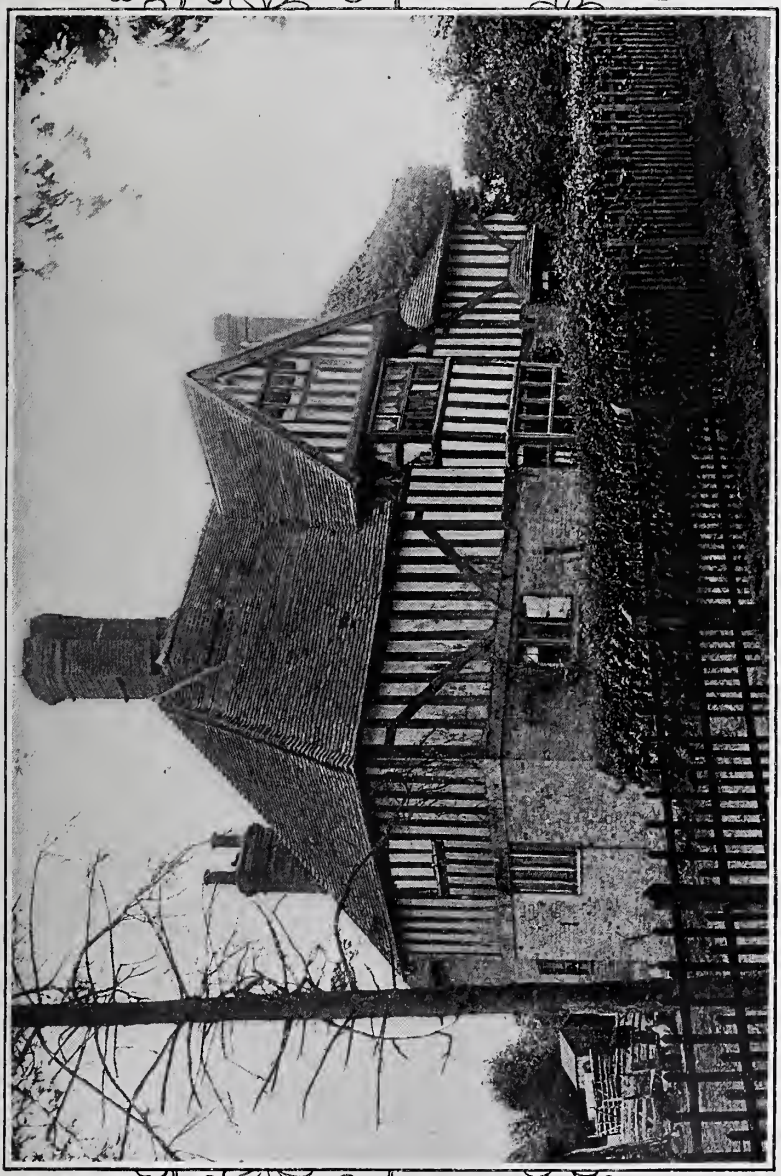


FIG. 4.—FORD PLACE, PENHURST, KENT.

the type shown for instance in such buildings as Randall's Park Farm near Leatherhead. With some attempt at imitating the picturesqueness of the older work, they are generally ostentatiously



BELL FARMHOUSE, HARRIETSHAM, KENT.



YEW TREE FARM, NEAR BECKLEY AND NORTHIAM, SUSSEX.

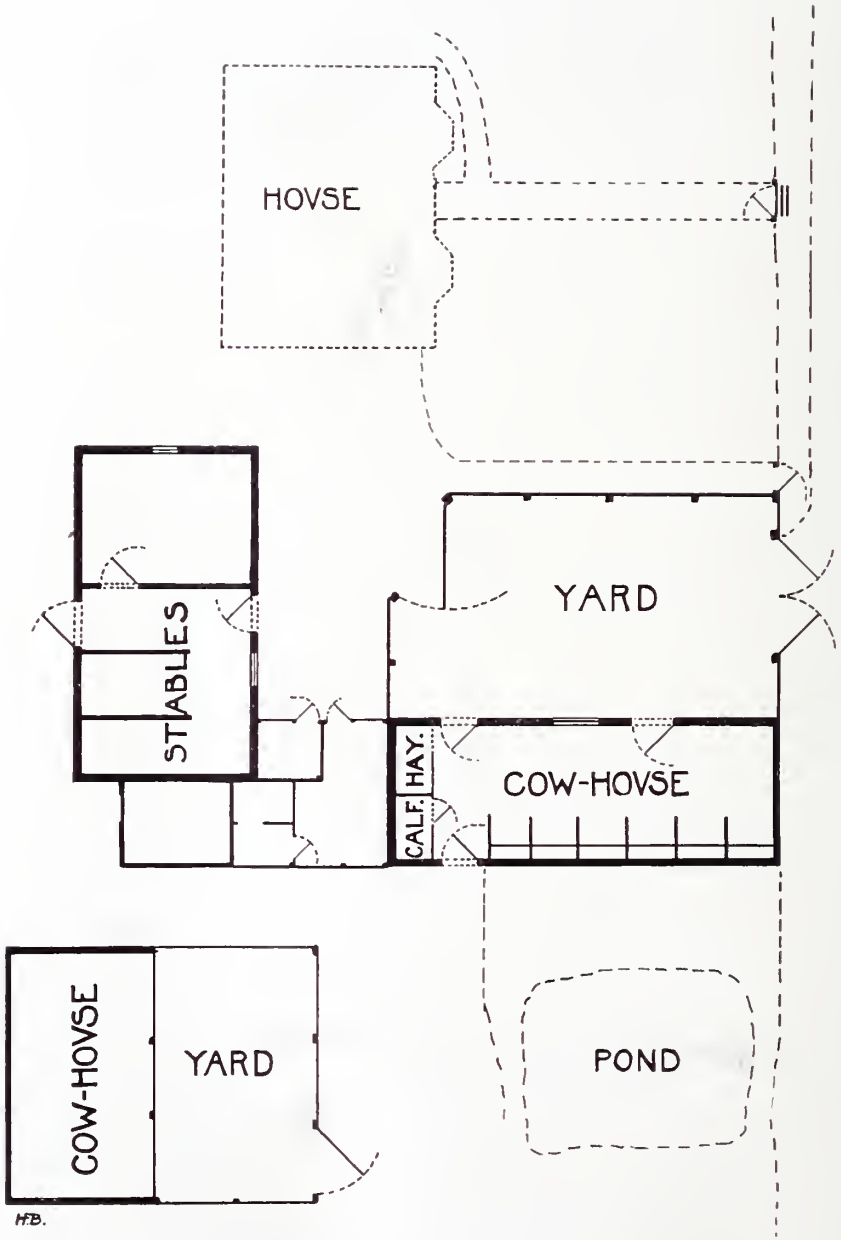


FIG. 6.—MANOR FARM, BIDBOROUGH, KENT.

simple, almost ugly, money being spent upon sound work rather than display. Still their color and their surroundings often save

FIG. 5.—FARMHOUSE, BIDBOROUGH.

them artistically, and they retain the reputation for homely comfort which the English farm houses deservedly enjoy.

G. A. T. Middleton, A. R. I. S. A.

ARCHITECTURAL APPRECIATIONS.—NO. II.

The "Flatiron" or Fuller Building.

IT seemed that there was nothing left to be done in New York, in the way of architectural altitude, which would attract much attention, after the way in which for years we have been piling Pelion upon Ossa. But the architect of the Flatiron, bounded by Broadway, Fifth Avenue and Twenty-third Street, has succeeded in accomplishing that difficult feat. His building is at present quite the most notorious thing in New York, and attracts more attention than all the other buildings now going up put together.

It follows from this extreme conspicuousness and notoriety of the work that it excites more comment, in exciting more attention, than any other recent building. "He who builds by the wayside," says the proverb, "has many judges." And certainly nobody else is building so obviously "by the wayside" as the author of the structure of which the public has thus far refused to accept the official title of "Fuller," preferring the homelier and more graphic designation of the "Flatiron." The corners furnished by the intersection of Broadway with the rectilinear reticulation imposed upon Manhattan island by the Street Commissioners of 1807 are not only the most conspicuous, but really the only conspicuous sites for building, the only sites on which the occupying buildings can be seen all around, can be seen all at once, can be seen from a distance that allows them to be taken in by the eye as wholes. In a civilized municipality these so advantageous spots would have been reserved for public uses, would have been the sites of public and monumental buildings. They are besides so few:

> Oh, it was pitiful
> In a whole cityful,

that those misguided men should have left only half a dozen sites for public buildings, outside, it is true, of those which face public squares. Let us count: This present corner, and the corresponding corner at Twenty-sixth, facing southward, at the intersection of Broadway and Fifth Avenue. At the intersection of Sixth Avenue the truncated triangle, largely spoiled, for the purposes of monumental building, by the intrusion of the elevated road, but set back a block by the reservation of Greeley Square, and the corresponding trapezoid on the north, wisely seized upon, years ago, for the uses of the New York Herald, and occupied effectively by the enlarged or at least elongated reproduction of the pretty palazzo of Verona, a building which compels attention by its modest altitude,

THE "FLATIRON" OR FULLER BUILDING.

Broadway and 23d Street, New York City.

permitting the owner to stand chronically and increasingly astonished at his own moderation, and has, in addition to its intrinsic attractiveness, the interest of lighting up, on one of the most valuable street corners in Manhattan, the "Lamp of Sacrifice," no matter at how queer a shrine. At the intersection of Seventh Avenue, the triangle, also truncated by the recession from Forty-third into a trapezoid, of which the base is now occupied by the new ruin of the Hotel Pabst, and the residue by a hole in the ground for the uses of the subway, and the corresponding and broader trapezoid at the north end of Longacre, at Forty-seventh. At the intersection of Eighth Avenue, the highly irregular space formed by the laying out on the gridiron of the street system of the "Circle" now such a scene of chaos, but at some early day, it is to be hoped, to be converted into something cosmical by the adoption of Mr. Lamb's plan, or some equivalent, and at which early date it is to be hoped the buildings which now line the segment and constitute the "improvement" of the Circle may in their turn be improved off the face of the earth; and at the north end the very eligible triangle lately occupied by Durland's riding school. Beyond this, westward and northward to the intersection of Ninth Avenue, it is not necessary now to extend our inquiries. Thus far, and in the heart of middle Manhattan, we have found just five sites for noble buildings, for we leave out of view the concave frontage of the circle at Fifty-eighth Street. Just one of these sites is thus far occupied by a modern tall building, which is the Flatiron. The building is thus unique, built not by one wayside alone, but by four waysides, and each of its three frontages far seen from the quarter it respectively confronts, and the Broadway front visible and apprehensible from the east side of Fifth Avenue almost up to the entrance to Central Park. No wonder that the architect should have found "many judges," no wonder that his building should have acted as a challenge, and goaded to architectural criticism those who never architecturally criticised before, while those who are victims to the habit of architectural criticism criticise all the more. With apologies to Catullus for dislocating his metre, one may say:

> Hic judicet qui nunquam judicavit:
> Quique judicavit, hic judicet.

It is the first condition of a sane criticism to take account of the conditions. "The sculptor cannot set his own free thought before us, but his thought as he could translate it into the stone that was given, with the tools that were given." And, if this be true of the sculptor, how much truer of the architect, whose work must be "modified at every turn by circumstance and concession." We have been saying that the architect of the Flatiron had a unique oppor-

tunity. But also he had to labor with corresponding disadvantages, mainly, of course, the shape of the area he was to cover. This is recognized in the popular name of his building, the long triangle which is called the Flatiron but which has been as graphically described as "a stingy piece of pie." The thoughtless public seems to impute this disadvantage to the architect, by way of criticism as a fault, instead of condoling with him upon it as a misfortune. In fact, the popular judgment upon buildings as works of art is mostly vitiated by the thoughtless habit of ascribing to the architect his advantages as merits, and correspondingly imputing his disadvantages to him as faults. Criticism must keep clear of this confusion.

The main, indeed, the only advantage the architect of the Flatiron had, was the comparative magnitude, the complete detachment, and the consequent conspicuousness of his work, and that is an advantage or not accordingly as the result is or is not successful enough to justify the conspicuousness. The problem in this case was how to make the most of the advantages of detachment, magnitude, altitude, and conspicuousness, and at the same time to minimize the disadvantages of the awkward shape of the plot, and to do these things without any the least sacrifice of the strictly utilitarian purposes of the structure. For to sacrifice the money getting possibilities of such a site in such a quarter to the monumental aspect of the building would have been as much a mistake in art as in "business." The point was to utilize the site to the very utmost, multiplying as many times as possible, as Paul Bourget has it about the tall buildings of Chicago, "the value of the bit of ground at the base," and yet to make as expressive, harmonious and beautiful a building as the conditions admitted. A candid inquiry into how far such a result has been attained in the actual erection ought to have interest and value.

Foremost among the practical advantages of the site is the fact that the designer did not have to trouble himself in the least about the lighting of his building. Even if we can imagine it confronted on three sides, across Twenty-second Street, across Broadway, and across Fifth Avenue, by buildings as tall as itself, it would be better lighted than many, than most, of the downtown office buildings of comparable altitude. The base is of nearly one hundred feet, but the straight side of the triangle must be nearly, and the hypothenuse on Broadway rather more than two hundred. There is thus no reason why every room on the base of the triangle, or at least of every suite of offices, should not receive light from one of the sides which receives its light from the great area to the north, from which the light cannot be intercepted, the comparatively dark middle of the southern front being backed against an included and counterparting triangle devoted to the service of the building, in which less illumi-

nation than in the rentable parts, or even an illumination entirely artificial, is entirely admissible. And then the problem would become, how to get rid of the architectural awkwardness and the practical ineligibility of the thin edge of the wedge, of the apex of the triangle, to get rid, in fact, of the "edge," which, in the expressive language of the street, must "queer" the whole structure if it be allowed to assert itself. We say this edge is practically ineligible, and shall presently point out that fact more in detail. But the architectural intolerableness of it might be expected to appeal first and most powerfully to an architect who was not only a prudent and frugal planner, in the interest of his employer, but also an artist. He would have devoted himself, one would say, to circumventing this awkwardness. Doubtless he would have tried many experimental devices to that end, "proving" them by their practical and their architectural results, and holding fast at last to that which was good, or best. Let us imagine, for example, that, instead of rounding his edge at the bottom, he had truncated the angle to the width of a decent doorway, and had continued this truncation to the top of the architectural basement, including the fourth story, treating his doorway as massively as possible with the dimension he had allowed himself, and, above the doorway, emphasizing the solidity of the truncated wall by leaving a single slit at the centre, which should serve for a lookout to the northward. Then suppose he had terraced the superstructure emphatically back, until the truncation amounted to, say, fifteen or twenty feet, enough to present something that could be called a face of wall, rather than a mere edge, and carried this through the "shaft." Above the shaft, suppose he had still more boldly and emphatically "refused" the superstructure by another terrace, leaving only a trapezoidal tower of, say, half the length, and two-thirds the area of the whole triangle, and carried this tower high enough to include all the rentable area he had omitted below. If this had been sensitively, that is to say artistically done, would not his building have shown more logic, more organization, more form and comeliness, more variety in a higher unity, than it shows now? And could he have been accused of sacrificing his clients to his architecture, if he had provided them with the same area of rentable apartments of which he had deprived them, at no greater cost, in a more eligible shape, and had even added to the altitude which is the distinction of the existing building, and which he might then, without offense, on such a site, have extended even to "the record," or "the limit," whatever the limit may be.

Of course, this is only a suggestion of one solution. Doubtless there are others, which would commend themselves to an architect buckling down in earnest to such a problem. To convert difficul-

ties into opportunities, out of this nettle, a difficult ground plan, to evoke this flower, architectural beauty, is the work of an architectural artist of high degree. Comparisons are odious. But compare the Flatiron with the John Wolfe Building at William Street and Maiden Lane, where the area was quite as awkward a base for a skyscraper as this present plot, and which was moreover entirely without the advantages of isolation and conspicuousness which constitute this present opportunity. How have the awkwardnesses there been circumvented and overruled to expressiveness and beauty which here have been left entirely undisguised, and without even an attempt to disguise them, if they have not even been aggravated, by the treatment. That is, in fact, the peculiarity and the misfortune of the present erection, the fact that the problem does not seem to have presented itself to the architect as a problem. It is not his solution which we have to discuss, and with which we have to quarrel, but his failure to offer any solution. Having an awkward triangle as a site, he has not recognized its awkwardness, nor its triangularity, nor the fact that his building was to be seen in perspective and from various points of view. He has simply drawn three elevations of its three fronts, and apparently seen it, certainly studied it, in elevation only. If, architecturally, the "Flatiron" were simply a street front, like so many other skyscrapers, it might very well pass as "ower bad for blessing and ower good for banning." Let us assume that either of the long fronts is the elevation of such a building, visible, or meant to be seen, like the paper elevation, only from a point in front of it. In that case, we should find it respectable but not interesting. Like Dante, we should not speak, but look only and pass, having, in truth, nothing to say. It is the conventional skyscraper, and shows that the architect is aware what is doing in skyscrapers. We should have to acknowledge that his general dispositions are according to the best authorities, that his three, or four, story basement is in accepted relations to his four-story attic and his twelve-story shaft, and that the eight-story hanging oriels which diversify his front are so spaced as on the one hand not visibly to destroy their own purpose of gaining sidelong views out of certain favored offices, and, on the other, as agreeably to diversify the monotony of the wall without impairing the effect of the repetition of its equable fenestration. Indeed, whether from accident or from design, these oriels have a happy effect in perspective, when the front from which they are projected is seen at a sharp angle, and they take on the appearance of plain piers, bordered above and below by fretted walls. The attic irresistibly recalls that of the Broadway Chambers, from which it seems to be immediately derived. To have improved on the original would have justified the imitation. But it is

neither so successful and well adjusted as a crowning member, nor so effectively detailed, nor is it so effective in either respect as the crown of the St. Paul, in which building the architect was no more successful than the architect of the Flatiron in overcoming or dissembling the difficulties of his site, but of which the crowning feature is in itself most effective and even impressive. The variety of color which makes so much of the charm of the crown of the Broadway Chambers is here expressly renounced.

We have, however, to congratulate the designer upon the effectiveness of his material. "There is safety in monochrome," and monochrome cannot be too monochromatic. In this case, the manufacturer has managed exactly to match the warm yellow-gray of the limestone base in the tint of the terra cotta above. Moreover, we have to congratulate the architect upon the success of his detail, especially upon that which answers the purpose, by means of a surface enrichment, of giving appropriate texture to his walls. The frequent failures in this show that it is more of an achievement than the uninitiated might suppose. In a front of hewn stone, this texture is given by means of the various modes of dressing the surface which are employed. In terra cotta it is, or should be, given by ornament. A designer who should confine himself in terra cotta to the limited range of variety available in stone work, and seek appropriate texture simply by roughening the surface according to the distance from the eye, and to the other relevant considerations, would show that he was not alive to the capabilities of his material, to the one point in which terra cotta has an actual advantage over masonry, and that is the facility with which its surface may be moulded into ornament. Systems of ornament, calculated in scale and density to effect the same varieties of texture attained by cruder means, through the use of the hammer or the chisel, are here imperatively "indicated." And in this respect the architect of the Flatiron has attained a result which is not only satisfactory but exemplary. Whatever its value as ornament, the scale and character of the surface enrichment are throughout such as to make it acceptable as a representation of texture. And, strictly as ornament, none of it is distinctly bad, and some of it is distinctly good. The frieze of the fourth story is effective in itself and particularly effective as denoting and emphasizing a transitional member of the composition. And the detail of the attic, especially of its bounding stories above and below, indeed, the whole feature, even if excessive, and even if inferior to its original, is well adjusted in scale, and the detail well adapted to its altitude.

But this praise, which one can honestly bestow, is all limited to the assumption, which the architect inscrutably chose to make, that

he was designing elevations and not a building. Either of the principal elevations, taken in conjunction with the edge upon which they converge, has not the aspect of an enclosing wall, so much as of a huge screen, a vast theatrical "wing," which conceivably rests upon Titanic castors and is meant to be pushed about, instead of being rooted to the spot. Nor, when one takes the point of view from which both fronts can be partly made out at once, the point opposite the thin end of the wedge, is the case at all bettered. To continue the spacing of the fenestration equally whether the space the windows are supposed to light is a hundred feet across, as at the south end of the Flatiron, or five, as at the north, is to invite criticism, even from the utilitarian point of view. The openings which are merely adequate to light an apartment say of thirty feet in depth, would evidently be excessive to light one with an extreme depth of fifteen, even if there were a dead wall opposite them. But to reopen the dead wall with a similar row of windows, and even to carry them across the five-foot end, in a double opening with the minimum of sash frame, is to denote want of thought. It is to provide a mere bird-cage for your tenant. As one looks through the bars of the cage, one pities the poor man. He can, perhaps, find wall space within for one roll-top desk without overlapping the windows, with light close in front of him and close behind him and close on one side of him. But suppose he needed a bookcase? Undoubtedly he has a highly eligible place from which to view processions. But for the transaction of business? And the æsthetic effect is even more depressing. The wedge is blunted, by being rounded, to a width of five or six feet—possibly ten. But it might as well have been produced to the actual point, nay, better, if the angle had been devoted to broadening the piers. For the treatment of the tip is an additional and seems a wanton aggravation of the inherent awkwardness of the situation. The narrowness of the tip and the high lanky columns wherewith the designer has seen fit to flank the entrance, give this feature a meanness of aspect and elongates the columns to an almost intolerable lankiness. And as the eye travels upward, past sash frame after sash frame, which takes away all aspect of massiveness from the point which most of all should seem, as it were, spiked to the ground, the possibility of repose is increasingly removed. And, finally, when, at the very top, one finds the gauntness of the bottom repeated and even enhanced, by the insertion in the narrow tip of another pair of columns running through an attic higher than two average stories of the substructure, he must say to himself that it is a great pity that the architect should have chosen to build on this very odd site an ordinary tall building, "built to the limit" in every dimenson, and thus have produced a very commonplace and conventional skyscraper, as the solution

of a very unusual and a very interesting problem which clamored for an original and unconventional solution. Such a spectator is bound to admit that

> Evil is wrought by want of thought
> As well as want of heart,

and that the altitude of this five-foot tip is really a "productio ad absurdum."

American Residence Series

THE

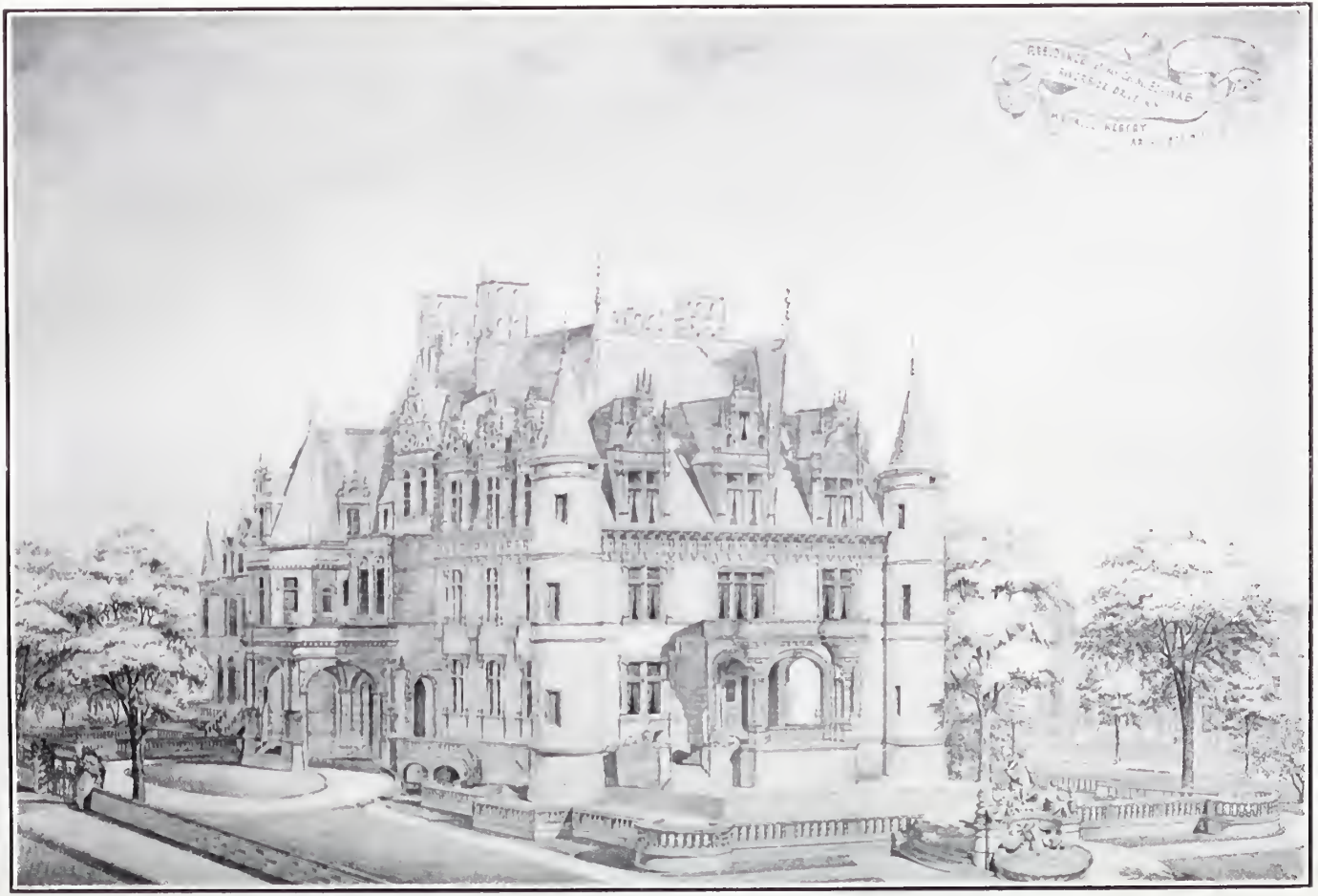
Residence for Charles M. Schwab

To be built at

Riverside Drive, 73d and 74th Streets

NEW YORK CITY

MAURICE HEBERT, ARCHITECT.

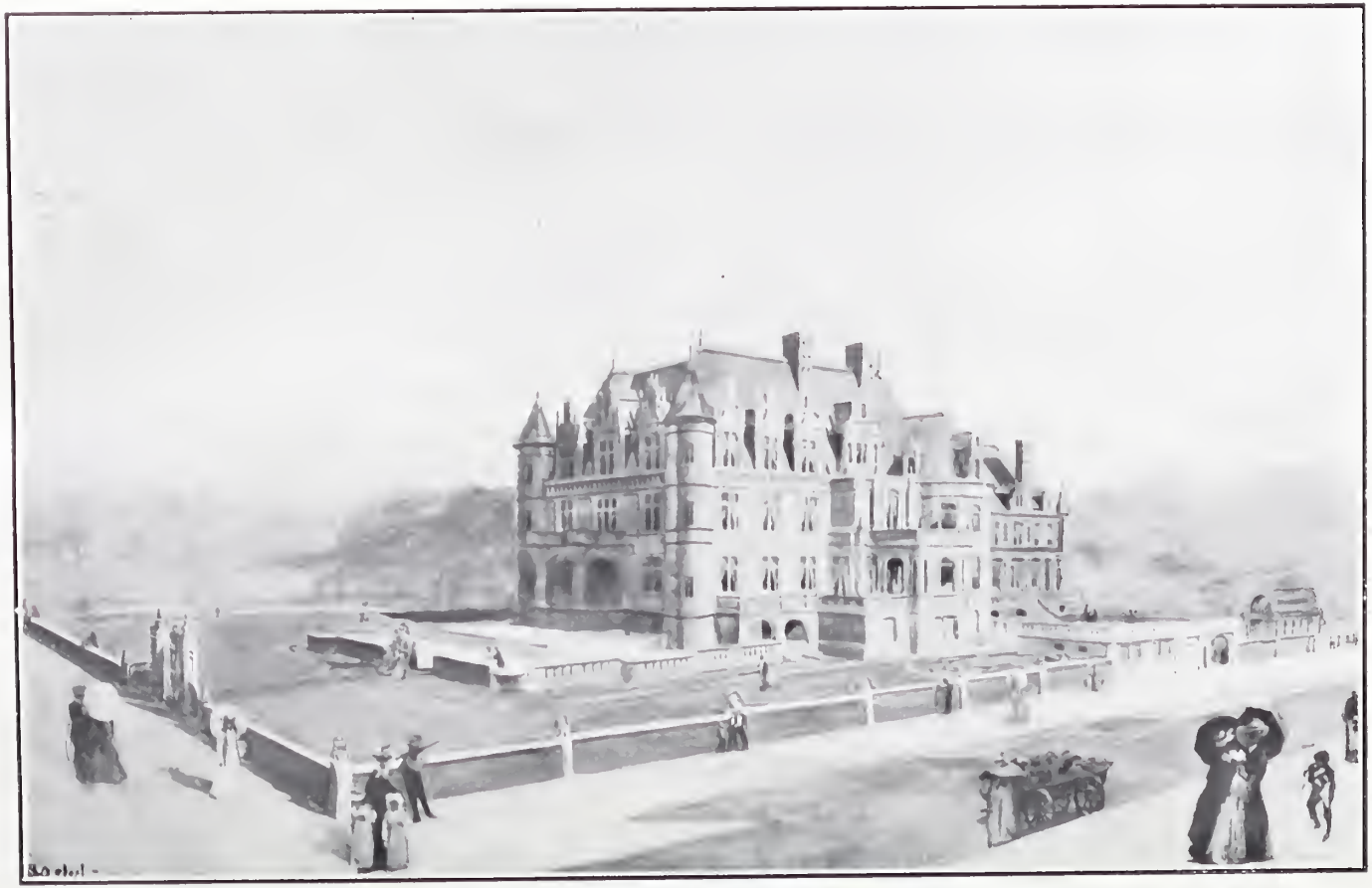


RIVERSIDE DRIVE AND 74TH STREET FAÇADES OF THE SCHWAB MANSION.

This building will occupy the late Orphan Asylum property bounded by West End Avenue on the east, 73d Street on the south, Riverside Drive on the west and 74th Street on the north. Mr. Schwab paid $865,000 for this block about a year ago, and the house, it is estimated, will cost several millions. Maurice Hebert is the architect.

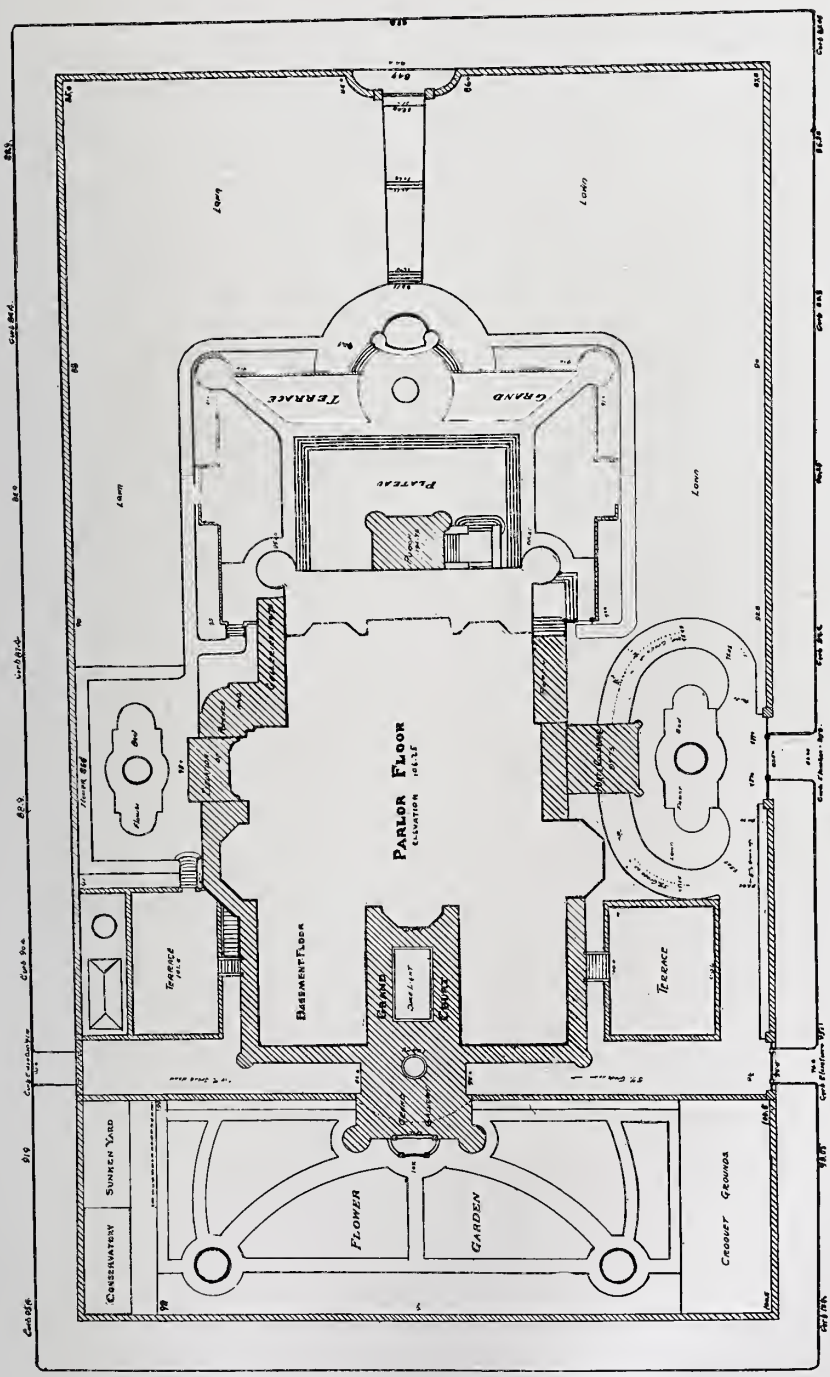
WEST END AVENUE FAÇADE OF THE SCHWAB MANSION,

Showing the Hudson River in the distance and a small portion of the 74th Street façade. The two rear wings of the house are shown, the northwest wing overlooking 74th Street containing the art gallery. The natatorium is located in the basement between the wings, while the chapel and music room are in the rear of the main building and are surmounted by a tower and belfry to contain chimes.



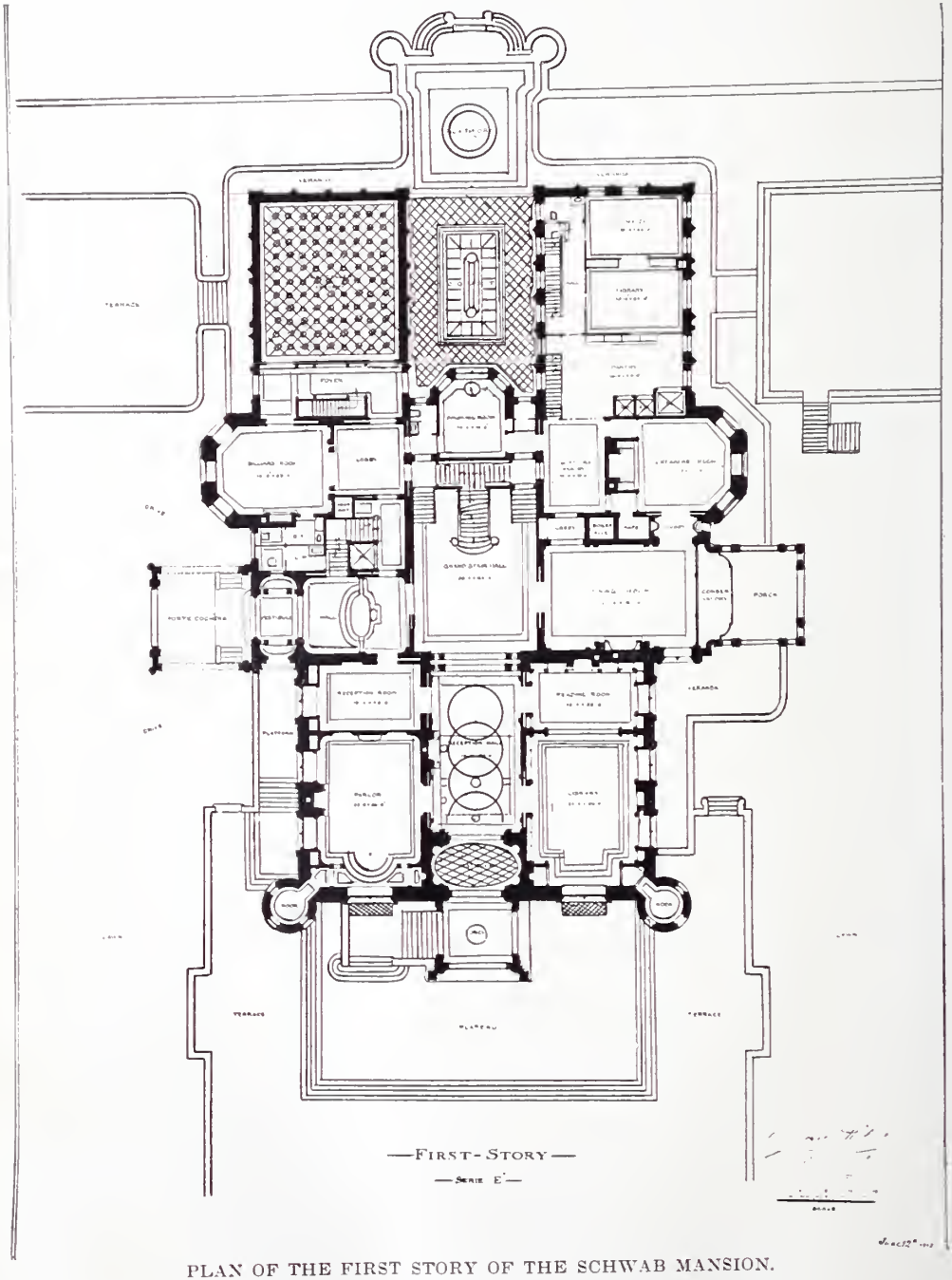
RIVERSIDE DRIVE AND 73D STREET FAÇADES OF THE SCHWAB MANSION.

Showing the lodge at the right, which is to be sunken below the surface so as to become part of the landscape effect. In this lodge will be located all the boilers and machinery for the house.

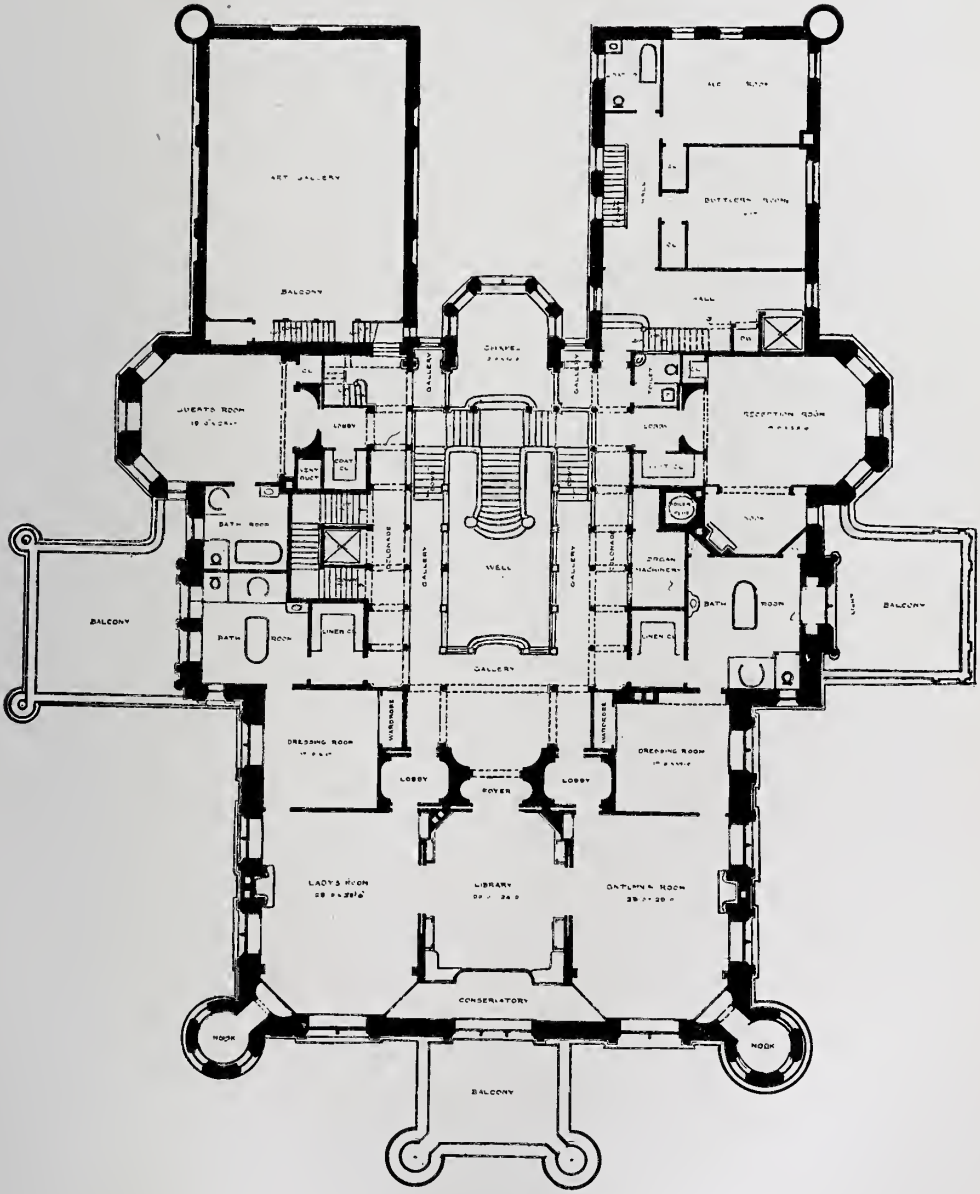


PLAN OF THE SCHWAB MANSION AND GROUNDS.

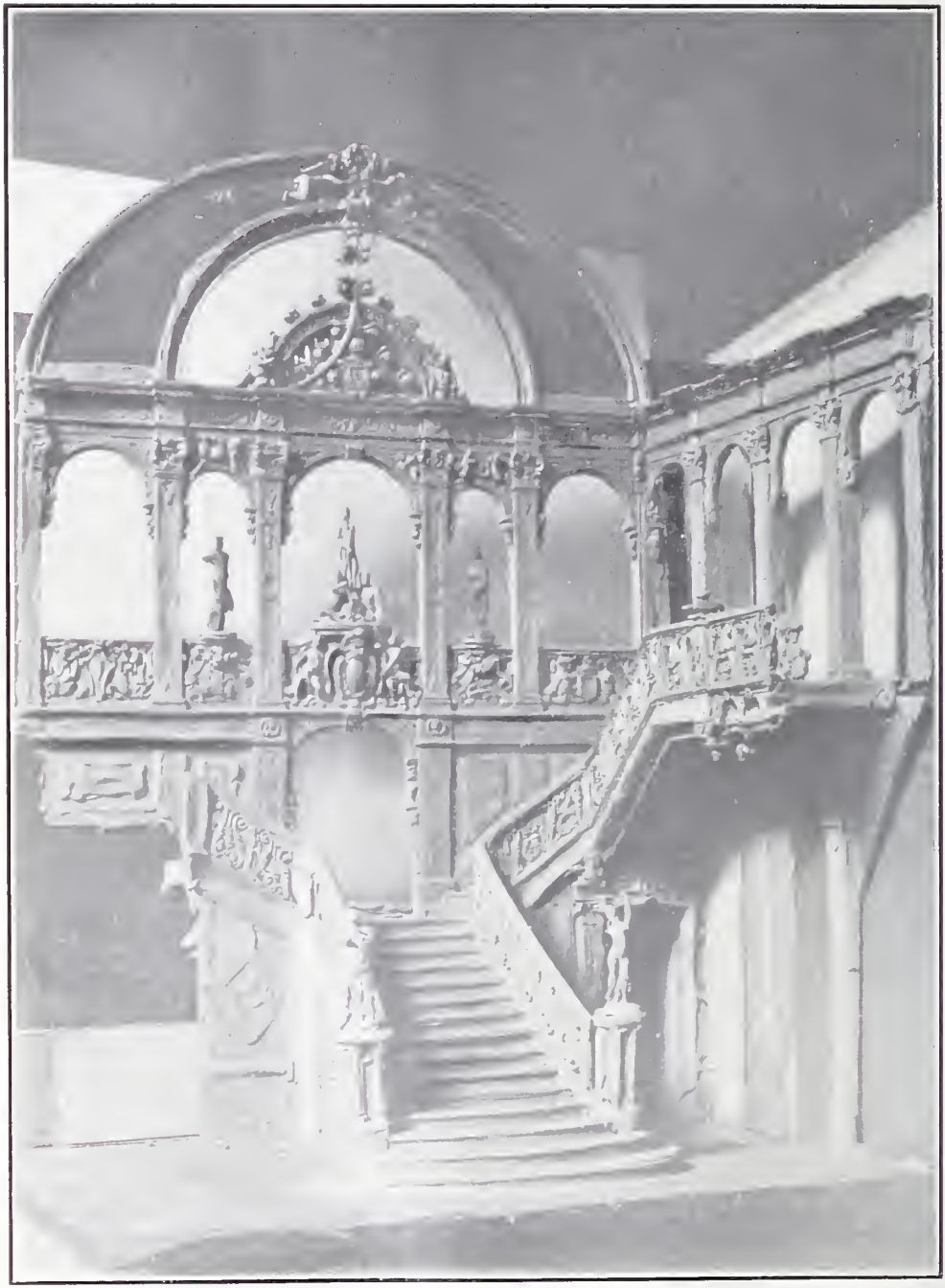
The landscape effect of the Schwab mansion along the Hudson will be especially elaborate, and gardeners from abroad will be called upon to plan for this magnificent lawn.



PLAN OF THE FIRST STORY OF THE SCHWAB MANSION.



PLAN OF THE SECOND STORY OF THE SCHWAB MANSION.



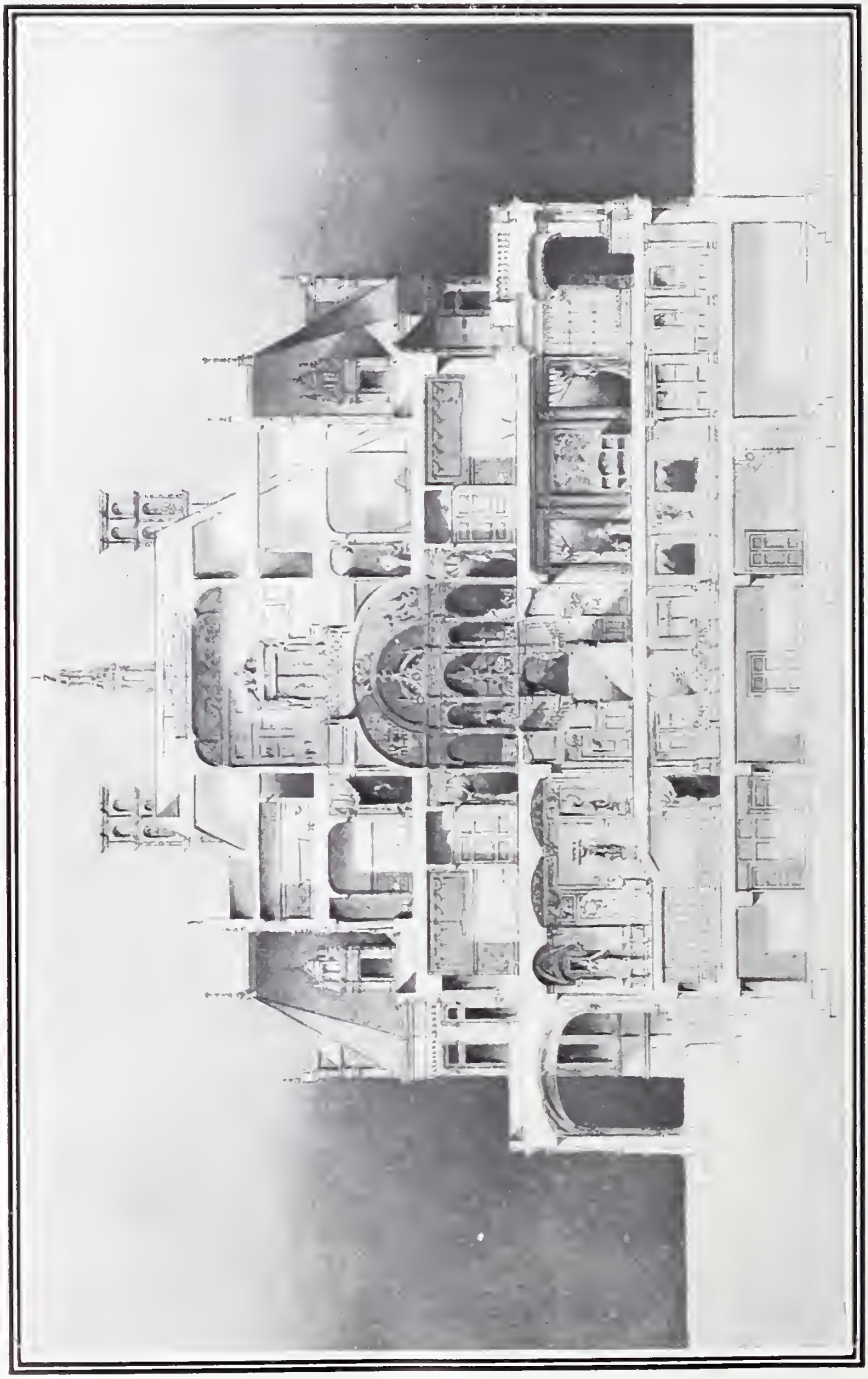
WAX MODEL OF THE GRAND STAIRCASE,

Showing the entrance to the music room at the head of the first landing, and also part of the beautiful colonnade which is to be an important feature on the second floor of the mansion.

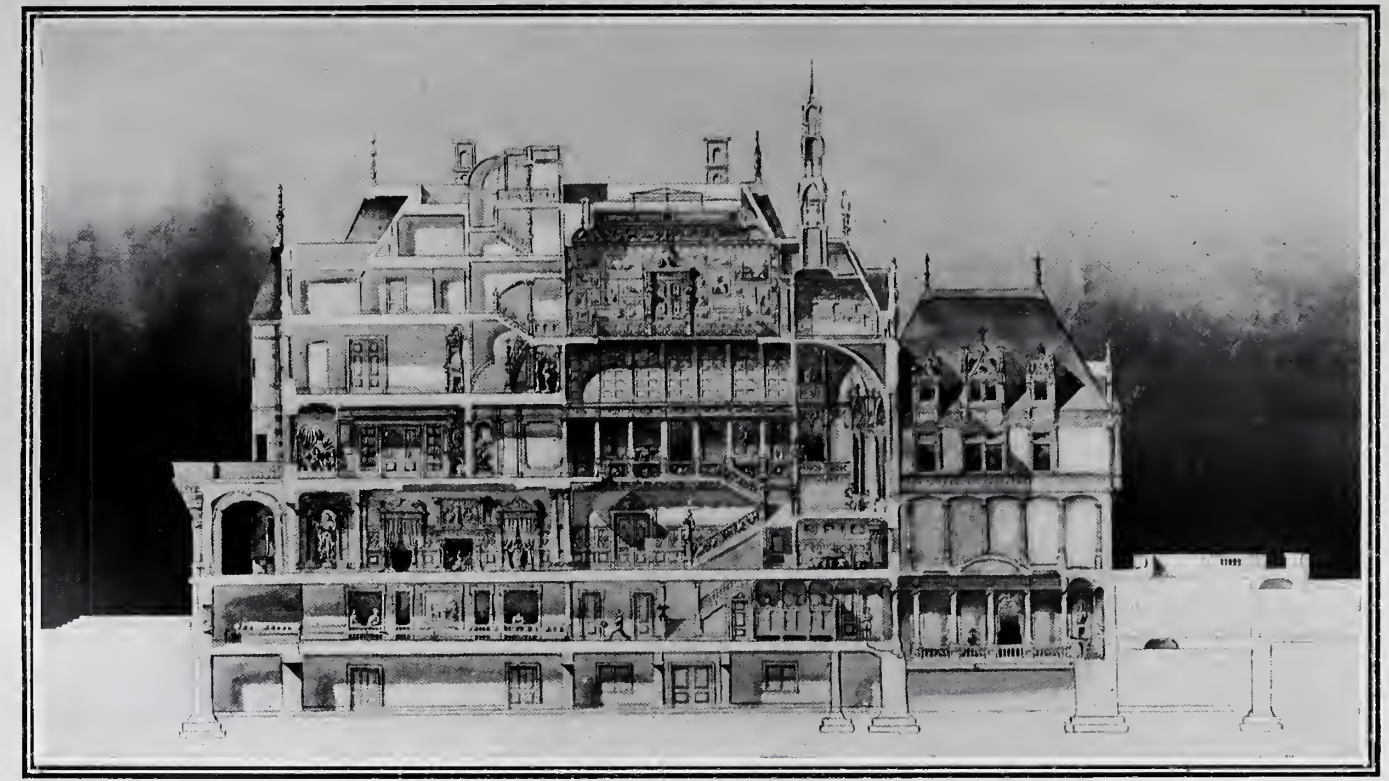
The upper illustration shows: Grand staircase and colonnade looking from the first landing toward the front doors opening on Riverside Drive. The colonnade and hallway on the second floor are shown.

The lower illustration shows: The grand staircase; it will be two-and-one-half stories in height. At the head of the first landing are the chapel and music room, containing a pipe organ. The gallery and colonnade extends around the second floor, and all the rooms open from this hallway. A beautiful lunette will occupy a place below the arched ceiling over the music room.

INTERIOR VIEWS OF THE SCHWAB MANSION.



TRANSVERSE SECTION OF THE SCHWAB MANSION,
Looking from the front entrance on Riverside Drive. The grand stairway is well shown here.



LONGITUDINAL SECTION OF THE SCHWAB MANSION,

Looking from the 73d Street side, and showing the cellar, basement with its natatorium, gymnasium and Turkish bath system; the entrance from Riverside Drive opening on the reception hall, the grand stairway, den and music room as well as the art gallery. On the second floor are the principal bedrooms and conservatory, while the third floor is for guests, and the fourth for servants. The roof garden and lookout tower are also shown.

ANNECY—BACK VIEW OF CHATEAU.

American Residence Series

The Residence of

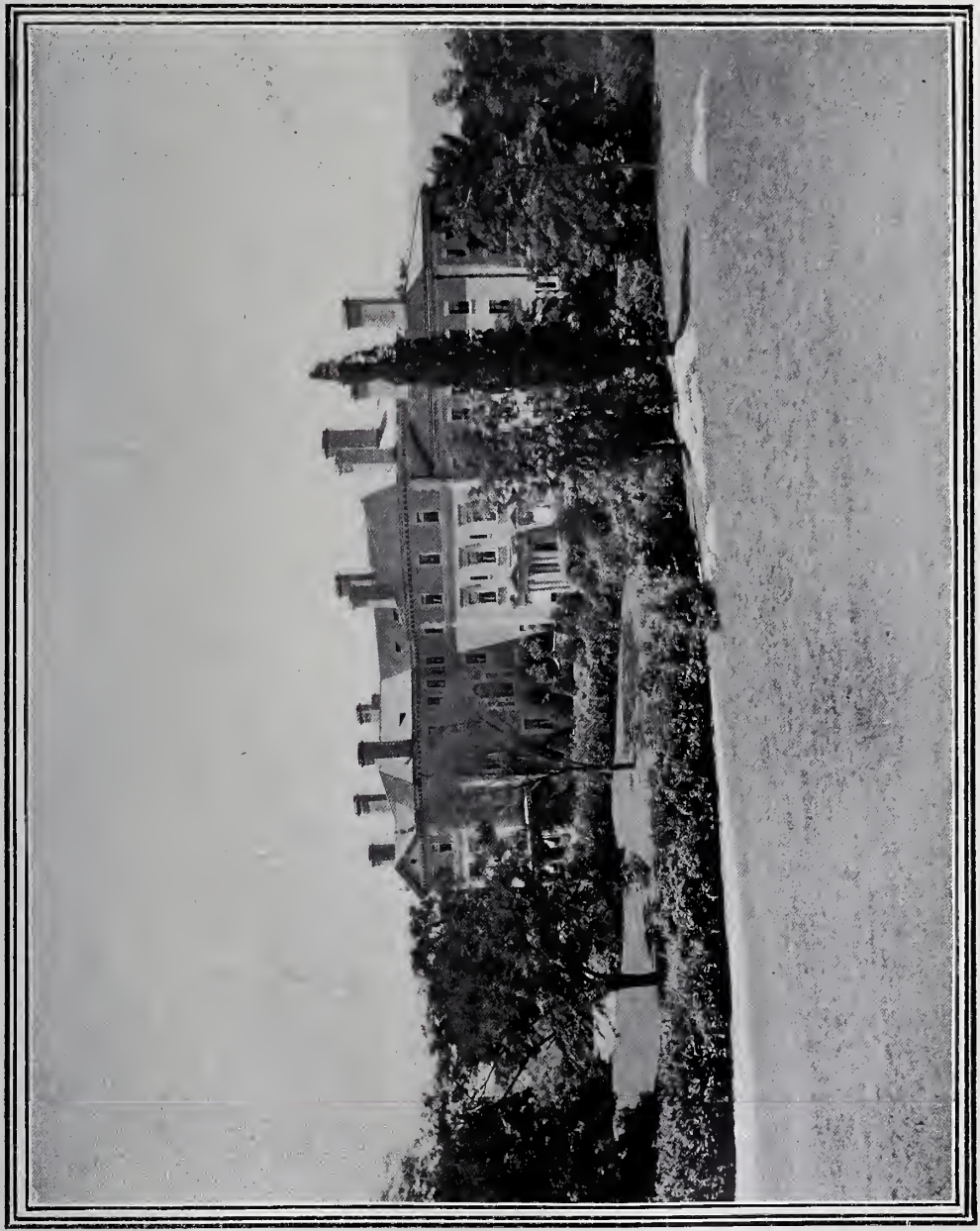
Mrs. Elliott F. Shepard

At Scarborough, N. Y.

McKim, Mead & White, Architects

RESIDENCE OF MRS. ELLIOTT F. SHEPARD.

Photograph by H. H. Sidman Co. Scarborough, N. Y. McKim, Mead & White, Architects.



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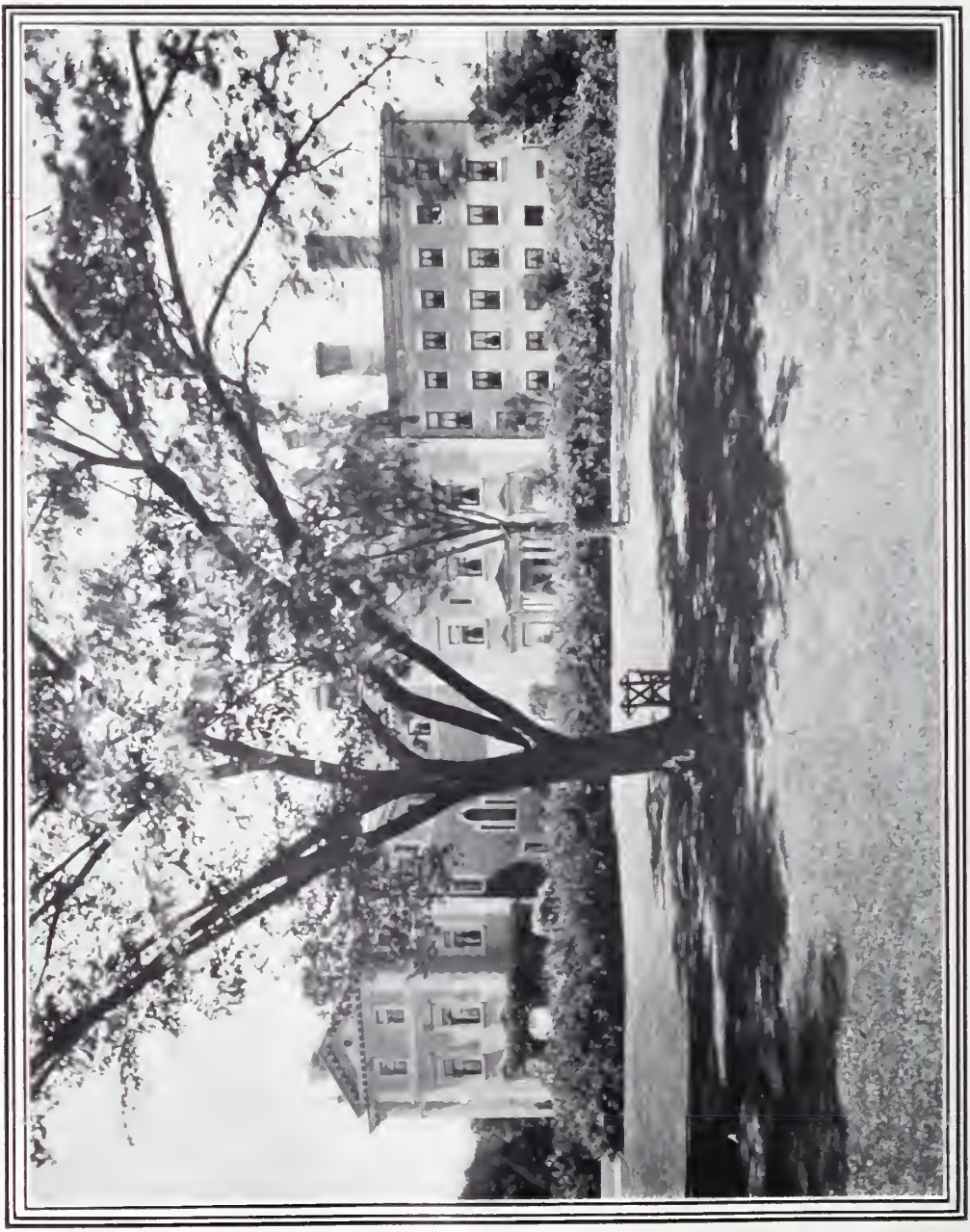

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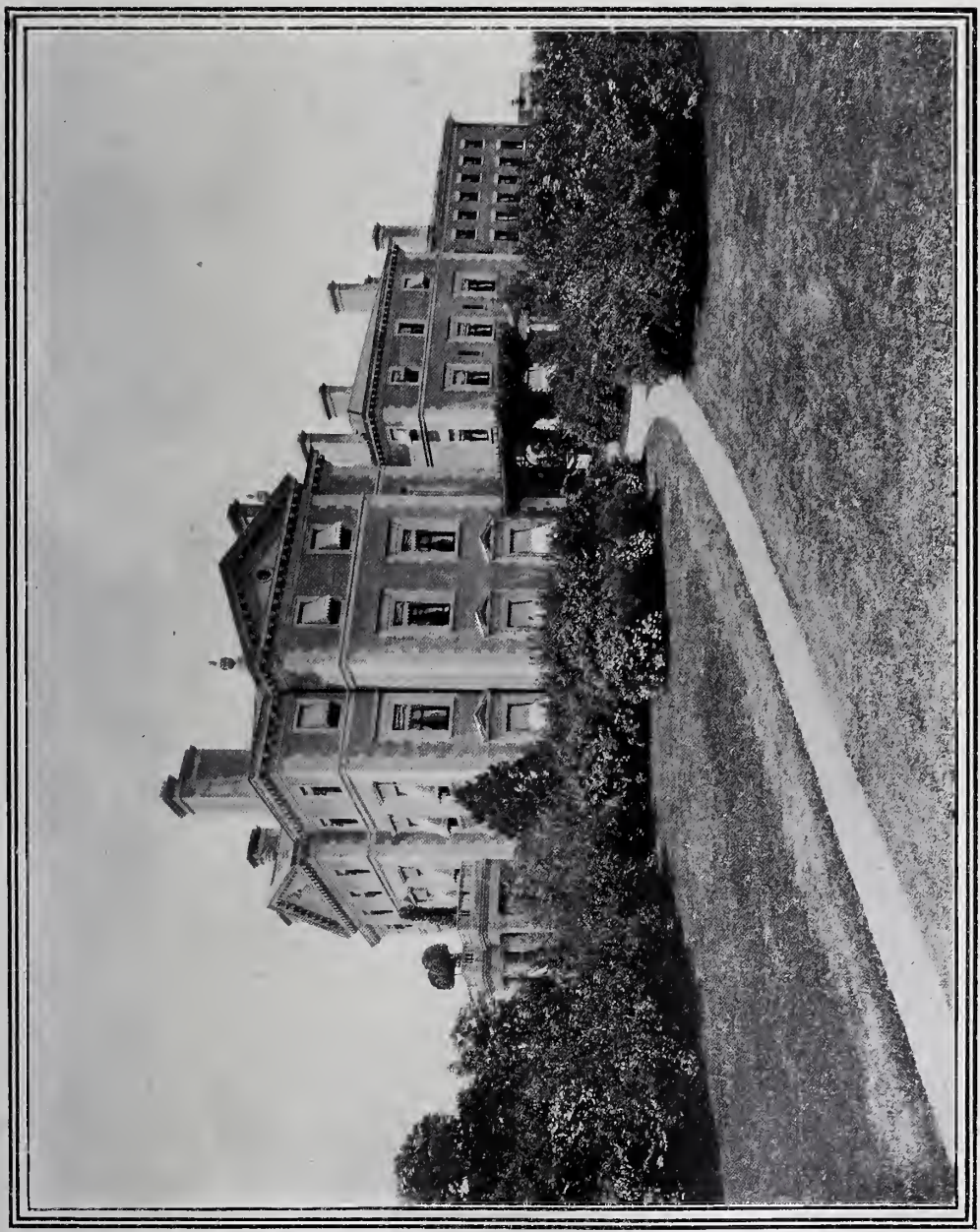

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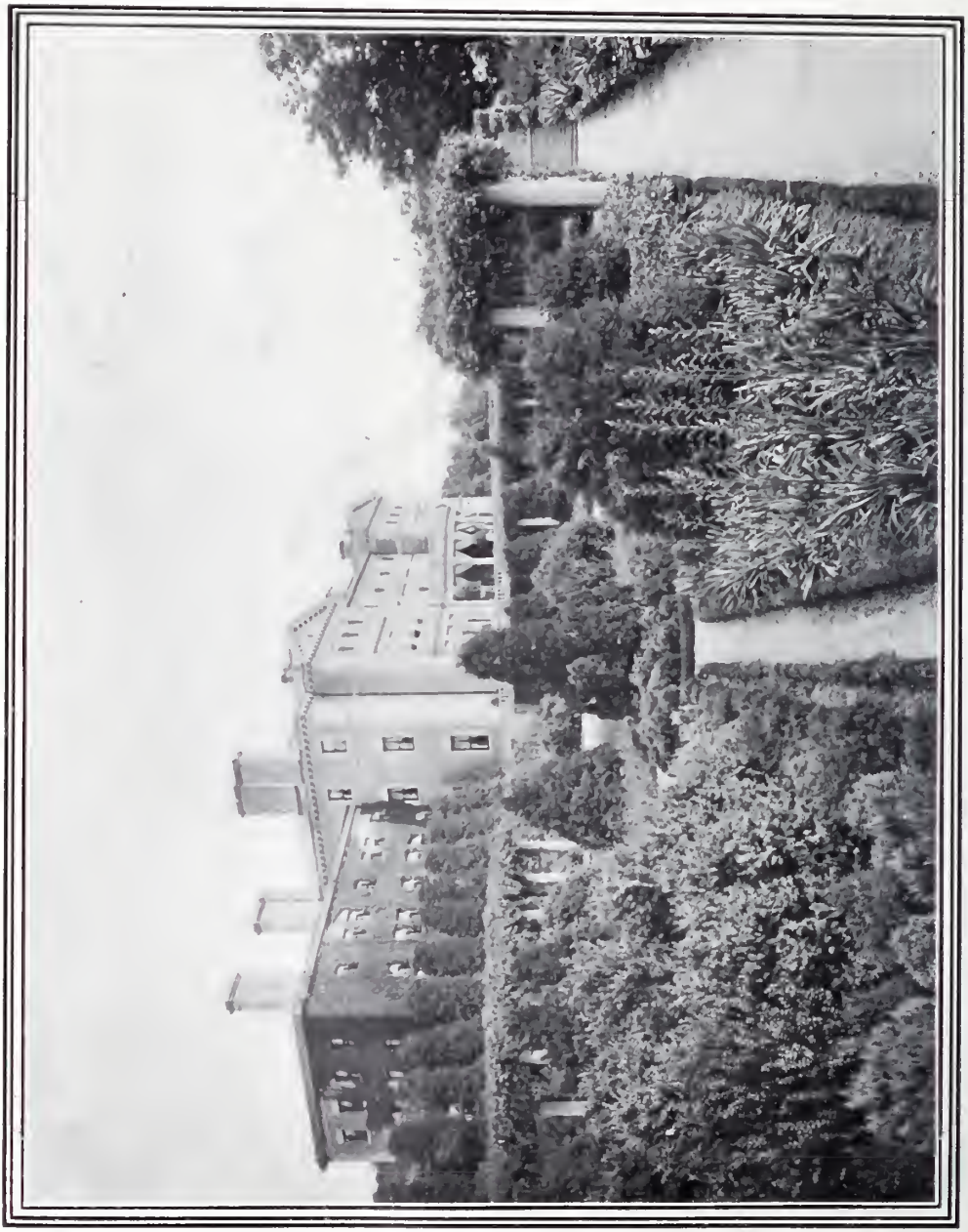

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THE STABLES, RESIDENCE OF MRS. ELLIOTT F. SHEPARD.

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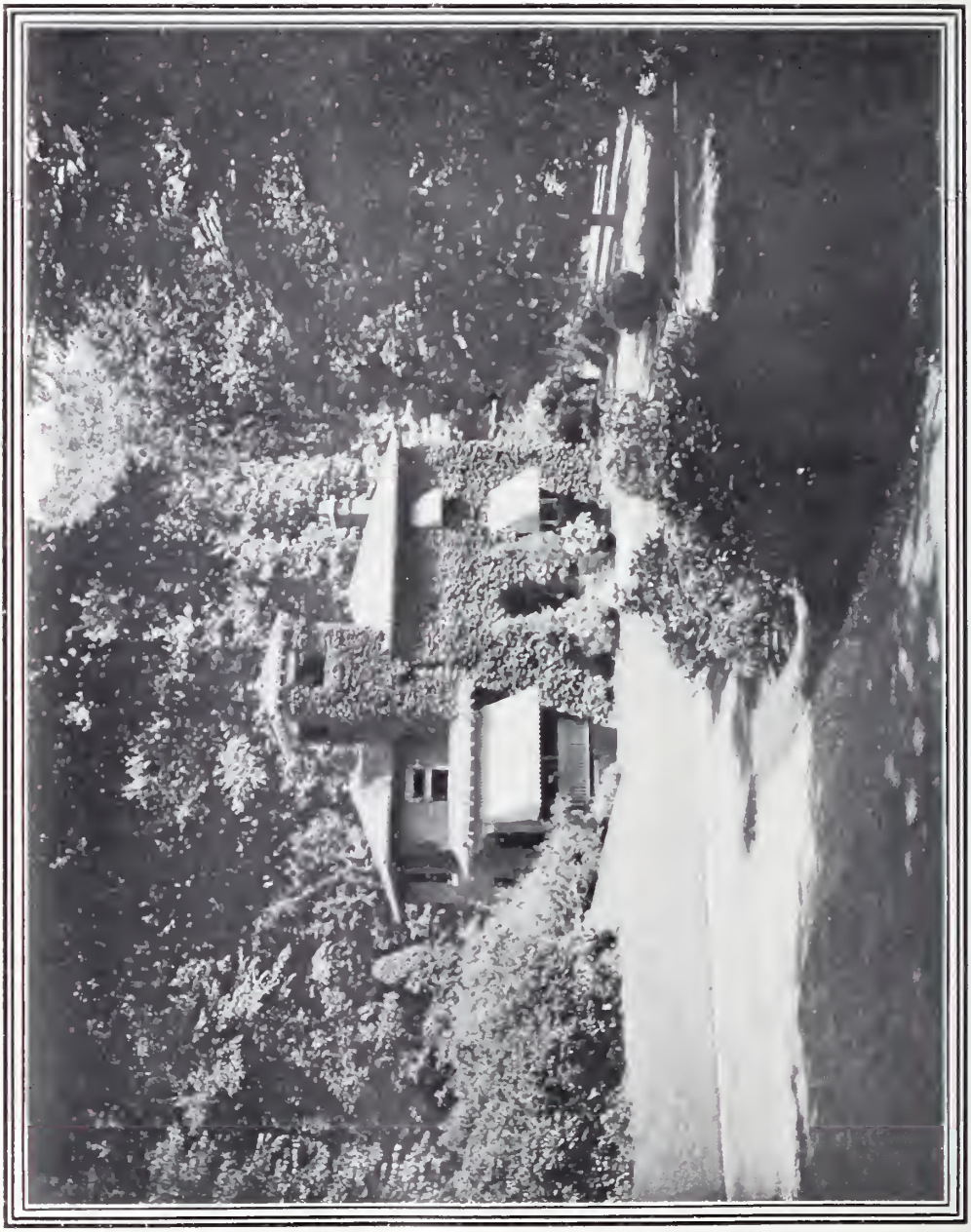

HOUSE ON THE GROUNDS, RESIDENCE OF MRS. ELLIOTT F. SHEPARD.
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GATES AND LODGE, RESIDENCE OF MRS. ELLIOTT F. SHEPARD.

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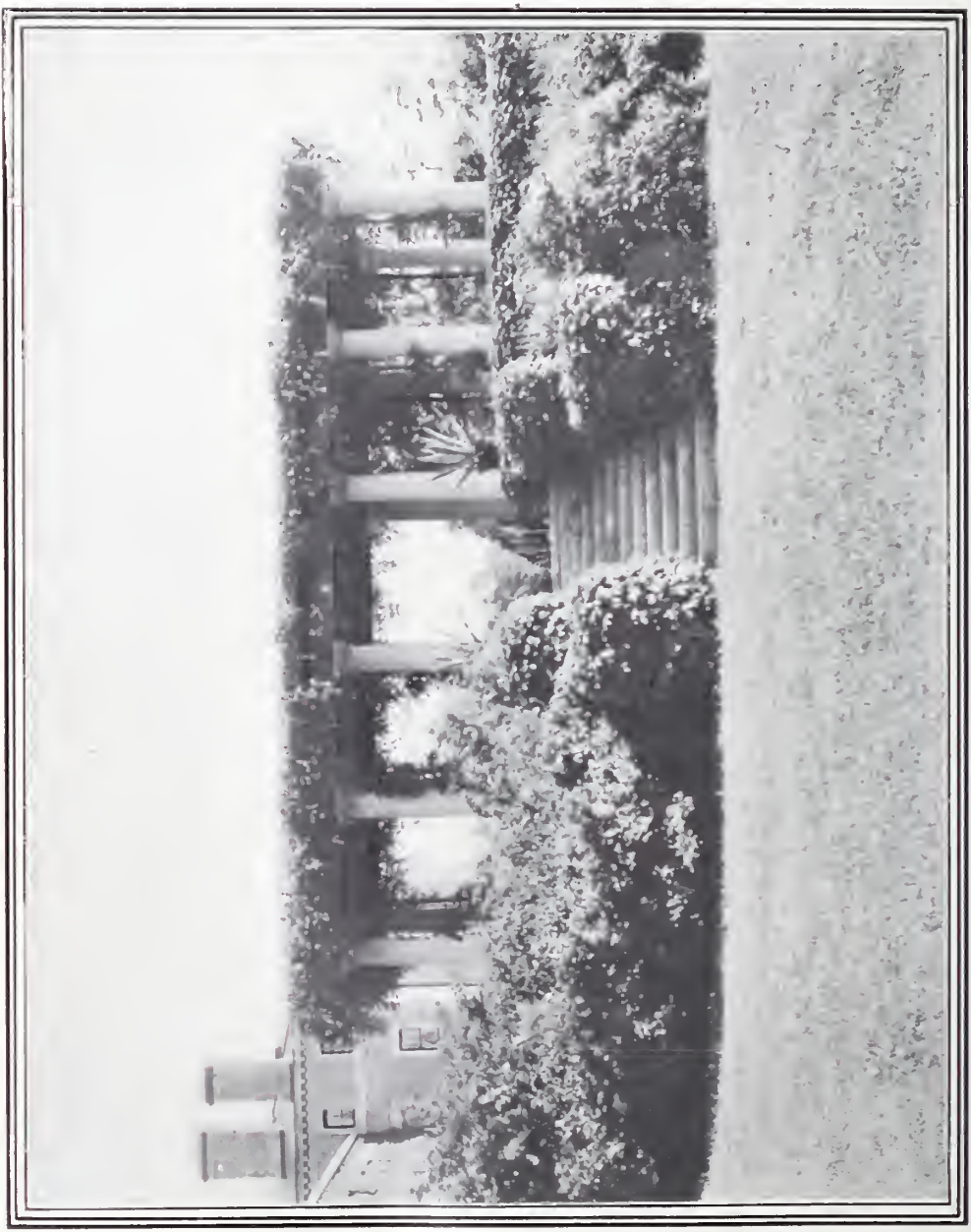

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IN THE GARDENS, RESIDENCE OF MRS. ELLIOTT F. SHEPARD.

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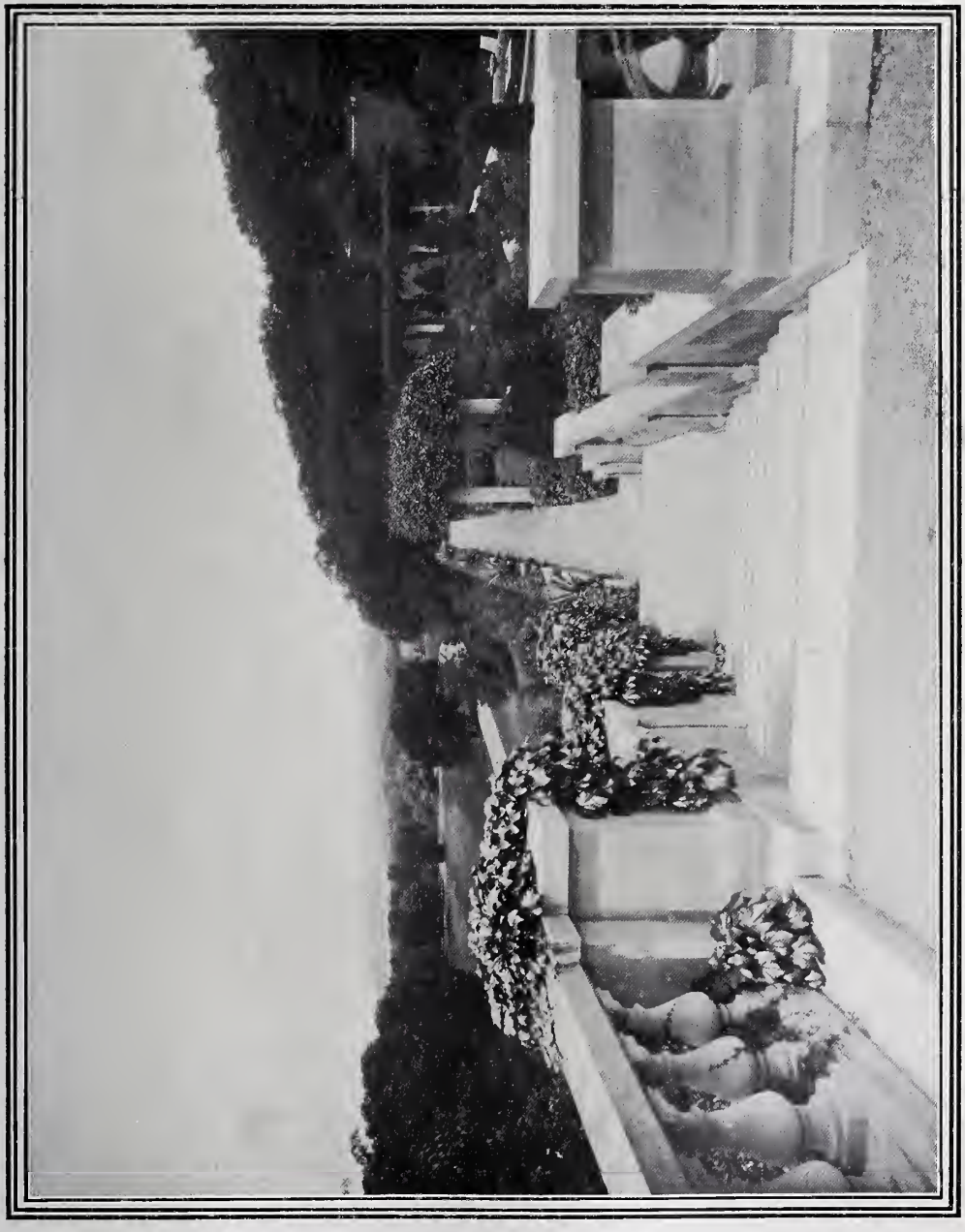

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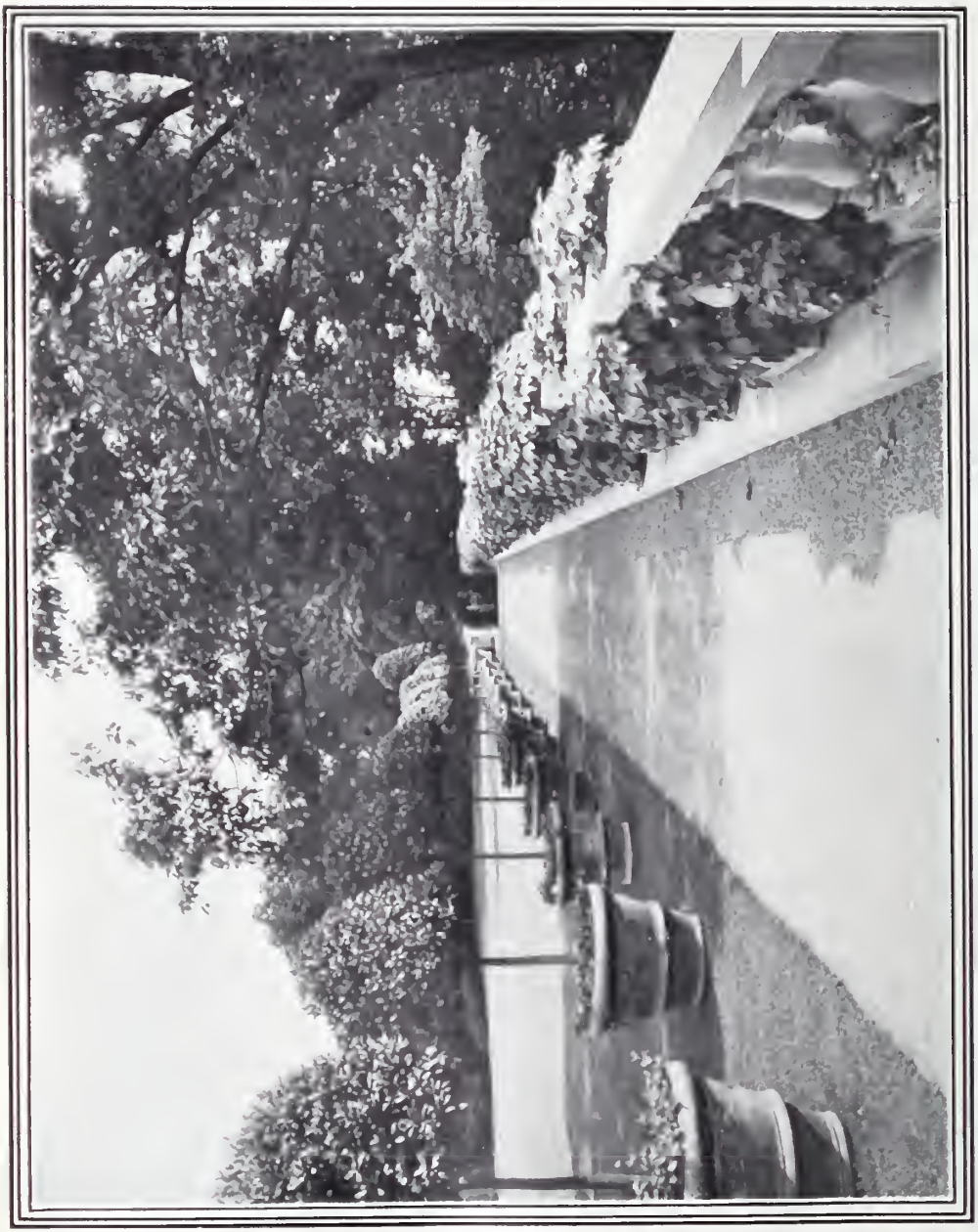

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AMERICAN ART IN BRONZE AND IRON. Compiled and edited by William Donald Mitchell, New York. Volume I., Number 1. Issued at Intervals. 36 pp.; size, 10¼ x 13 ins.

"American Art in Bronze and Iron" is a magazine illustrating the works of the leading architects, sculptors and decorators in bronze and iron, executed by the firm of Jno. Williams, New York. The first number was published late in July and succeeding numbers will be published every now and then. It will be circulated free to architects, sculptors and decorators and those allied thereto sufficiently interested to demand it.

The magazine is a work of art so far as typography, press-work and the general make-up is concerned. The first number is devoted to memorial tablets, showing illustrations of church tablets, tablets erected in universities, colleges, schools, libraries, memorial buildings and hospitals. Also tablets for banking institutions, public buildings, mercantile buildings and for monuments, all executed by the Jno. Williams Bronze Foundry.

Three pages are devoted to the bronze tablets placed in Memorial Hall, United States Military Academy, West Point, by the firm of Jno. Williams. It appears that this foundry furnished twenty-five bronze tablets, which memorialize different officers. The tablets were designed by Mr. Stanford White, the architect of Memorial Hall.

As the editor announces, he intends to devote the succeeding numbers to the different branches of the art in bronze and iron. It is intended that the next issue be devoted to bank interiors. Following this number there will be one for bronze doorways and grilles, and another for statuary in bronze. Like the first number, these will show only the best work of such architects as McKim, Mead & White, Geo. B. Post, Bruce Price, Cass Gilbert, Ernest Flagg, Carrere & Hastings, Clinton & Russell, Horace Trumbauer, Furniss & Evans, Green & Wicks, Isaac S. Taylor, Peabody & Sterns and many others.

The issue illustrating sculpture in bronze will contain the works of such prominent sculptors as Augustus St. Gaudens, D. C. French, Chas. H. Niehaus, Herbert Adams, A. Phimister Proctor, Massey Rhind and the late Olin L. Warner.

It is the aim of the editor to have his magazine take its place in the architect's office as a book of ready reference, and it looks as though he will not be disappointed in that respect.

MODERN CARPENTRY. By Fred. T. Hodgson. 190 pp., illustrated. Chicago: Frederick J. Drake & Co. Price, $1.00.

This is a practical, up-to-date manual, and seems to be a complete guide. It contains hundreds of quick methods, and is illustrated with many diagrams. No one can read it without profit.

TECHNICAL DEPARTMENT.

THE COMMUNITY OF TWO GREAT ARTS.

THE world-famous music-room, beautiful as art can make it, musical as science can contrive it, the center of the world's musical life, ever shifting toward our metropolis—this music-room, if not already existing, will be built within the next decade. Who will be its architect? Who its Maecenas? It will be the center because its pivot will be a generous personality of commanding force and energy, a personality that gives and attracts in balanced income and outgo; income, because in giving we receive; outgo, because receiving involves giving.

As I write, the indebtedness of American art to its busy, hard-working amateurs comes vividly before me, to its business men, in the erection of whose homes our arts have been born, in the conduct of whose daily life they flourish; to the men who have stood behind our sculpture, our architecture, our landscape gardens, our forestry, our types of animal life, advancing under their fostering care step by step toward perfection. My mind flies to the forests and fields of Biltmore, to the book collections of Morgan, the musical instruments of Mrs. John Crosby Brown, to the pictures of Henry Marquand, and, most vital to the subject of this paper, the constant intelligent patronage of music by Mr. W. C. Whitney.

In the home of the connoisseur of this stamp this coming music-room, which is to be not a warm heart for music only, but a beneficent guiding power in our growing musical life, will presently be found. It must be there because it can only come into existence in the presence of that type of genius which by instinct touches all its means of enjoyment into higher productive energy and more liberal development. It must of necessity belong to the man of multiform activities and boundless resource.

Such men, busy, alert, eager, beneficent in their getting and spending, are developing throughout the country. They reach out toward beauty. Thanks to them America has within the last few years seen a renaissance of architecture, of decorative art and even of music. The great patrons and connoisseurs are at the centers of wealth, the wealth it is their function to protect and preserve. But

wherever labor has been wisely directed and successful the arts are welcomed and rewarded.

With advancing culture what may be called a historical connoisseurship has become widespread. This is the forerunner of true culture. "First the natural, then the spiritual." To-day architects and furnishers are strong on the "periods" of French decoration, and the public buys Chippendales with emotion. In the better houses of the South and West, even the firedogs are expected to conform to the unities of the scheme of decoration. In consequence of this widespread and increasing feeling for decorative art, a demand for artistic piano cases has arisen. Its inception was felt by Steinway & Sons in the increasing list of Steinway pianos ordered for decoration in Europe, and later and more acutely in the requisition for repairs of these fragile materials and cabinet-work imported at great expense. The department for artistic case-making now successfully inaugurated at Steinway Hall and equipped with every resource for the production of art-cases, was the timely response to a well-pronounced need. New York contains exceedingly skilful workmen in every branch of artistic production. Her architects are second to none. Her artists have a school of their own which is equal in refinement, purity, and spiritual insight to any in Europe. Surely our connoisseurs have no need to seek foreign creative genius or foreign handcraft for the completion of their palaces. In fact, under the direction of our foremost New York architects, more than one noble instrument has already issued for the Steinway ateliers, and the near future promises to develop piano cases that will rival the Rossi clavichord in splendor and far exceed it in the true elements of beauty.

The fate of the piano up to this promised alliance of mutual interests has been far from satisfactory. The finer the tone, the more sensitive it is to its surroundings.

Has it ever occurred to the great modern architect that each interior designed by him is a musical instrument, good or bad? That the delight of living in an artistic interior day by day is modified by the musical character of its resonance and the degree of comfort in which conversation may be carried on within it? That "stuffiness" is often but another name for poor acoustics, while whispering galleries are quite as tragic in American country houses as in European cathedrals?

Very seldom does the grand piano sing in the highly ornate drawing-room as it does upon the floor of Steinway Hall. True, every room affords one spot where the piano sounds better than elsewhere in that particular interior, but this is almost invariably exactly where it is impossible to place it. Why is it that the piano whose tone is so soft and muffled in the drawing-room is as loud as a megaphone at mother's pillow upstairs?

Musical vibration is in many respects very much like electric fluid. It may be conducted upon congenial surfaces. It springs easily from one conductor to another and sets up vibrations which yield their own overtones unlike those audible in the original note. It proceeds in waves which are refracted from some materials, broken or absorbed by others. The great art of piano-making consists less in exciting desirable vibrations than in preventing those which are undesirable. To excite, prolong, diffuse and at the same time divert and suppress vibration is the art of the musical instrument-maker. This being so, what must be his feeling toward the decorator who imports into the music-room a chandelier hung with lusters, each vibrating its own tinkling harmony to the chords of the grand piano fated to stand in the same interior?

Very little is known of the laws of resonance of hollow chambers or the behavior of their surfaces, contents and materials, but what is already known points to the benefit that would accrue to collaboration between architect and piano-maker in the construction of rooms destined for music as a part of the daily life of the residents.

As far as music is concerned the music-room is certainly for the piano, not the piano for the music-room. The ideal music-room should be designed with a view to placing the piano in the most advantageous point of resonance. No steam-heater should consume its precious resins, no window blow into its shining web of steel, no staircase offer an open funnel to draw its sound upward, no curtain hang to smother its delicate vibrations, no artful system of pillars break them into eddies.

The palaces of America all contain pianos, usually Steinway pianos, whose size makes them the dominating element in the ensemble of the interiors in which they stand, while their tone, noble, fragrant, volatile in proper entourage, is at the mercy of the errant fancy of architect, decorator and upholsterer. In the interest of these gentlemen we freely grant that an object six, seven or more than eight feet long, and of somewhat heavy proportions thrust abruptly into the delicate harmonies of line and color which American architects are achieving with more and more perfection, needs skilful modification in outline and color to bring it so perfectly into harmony with its surroundings that its presence is felt only as an element of the perfect balance and charm of the unified whole. In acoustic qualities, the music-room should be a unit with the piano. In appearance, the piano should sink into the unities of the music-room. Nevertheless, as the largest object visible, it should be the most beautiful object in the room. In a living-room the hearth becomes the all important point, the center toward which the life of the inhabitants necessarily converges. In a music-room the piano is the point of convergence. It follows that the architect, while studying to enhance the musical charm of the piano, should assume control of the external appearance of the instrument itself. Thus the interests of the great architect and those of the maker of fine pianos become at one in direct proportion to the richness and magnificence of the interiors in which pianos are destined to stand.

Fanny Morris Smith.

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November, 1902

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BILLIARD ROOM OF M. BRACQUEMOND.

Mural Painting by Jules Cheret.

Furniture by Alex. Charpentier.

The
Architectural Record.

VOL XII NOVEMBER, 1902. No. 6.

ART IN THE CITY.

Streets and Monuments.

PEOPLE are beginning to recognize that it is almost as necessary that man be surrounded by beautiful objects as that he have bread to eat. Once his daily bread assured, he feels the need of a little art to brighten his life. He wants to have it in his house, and in the city where he dwells. Strange as it may seem to mercenary, utilitarian individuals, men take great delight in seeing their city rich, renowned, beautiful, and outshining its neighbors by the splendor of its monuments. The Italian tyrants of the Renaissance period, knowing the human heart, obtained forgiveness for their tyranny by erecting palaces and churches, the beauty of which flattered the local pride.

We want beautiful cities.

We propose to show, in the present article, what are the things which help to make a city beautiful. A concourse of circumstances are necessary: we will try to indicate the principal ones. Nature can do a great deal in this direction, but art, which is man's work, can do still more. The subject is a wide one, but so many useful lessons are to be learned from its study—lessons which our city councils can profit by—that it deserves to be dealt with at some length.

Natural Beauties.

We do not think that, as a general rule, the founders of cities have been influenced in their choice by the beauty of the landscape. The suitability of the spot has been the only point considered. Thus we see cities variously endowed in this respect. For instance, Naples, built in terraces on the shores of a magnificent bay, cannot be compared with Berlin, which stands on the flat, sandy banks of the Spree.

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Broadly speaking, it can be said that the proximity of the sea, the fact that a river flows through the place, or that the ground has differences of level, are all natural features which contribute to the beauty of a city.

It is not essential that a city be built on seven hills, like Rome; but it is certain that monuments appear to greater advantage when placed on high ground. Such will be the case with the cathedral on Morningside Heights, New York City, and it is likewise so with the Church of the Sacred Heart, Paris. This is an edifice mediocre in itself, but from the fact that, dominating the city, it can

A DOUBLE DECKED BRIDGE IN PARIS.

This is the Viaduct d'Auteuil, which was built by Napoleon III., and is used both by vehicles and trains.

be seen from afar and is sometimes bathed in sunshine when the roofs at the foot of the hill are covered with smoke or mist, it acquires additional importance, for which, however, no credit is due to the architect. In the same way, a river running through a city is a source of beauty. But these natural beauties are of no account if man is unable to take advantage of them. It is here that human action—taste, in short, Art—comes into play.

How a City Utilizes the Natural Beauties of the Spot.

We will cite three well-known examples showing how certain cities have neglected the natural beauties of the place and how others have turned those beauties to account. Let us take three

cities which are either traversed or bordered by rivers: New York, London and Paris.

At New York, the Hudson, an admirable stream, does not contribute in any way to the city's beauty, from the Battery to 72d Street. Throughout this length it is without quays or promenades; one does not perceive it; it is merely an instrument of commerce, invaded by docks, stages, warehouses and depots. Above 72d Street, however, its banks have been adorned with a superb promenade—Riverside, which brings into relief its incomparable beauty. The campaign for the preservation of the Palisades betokens a de-

THE PANORAMA OF PARIS.

termination, tardily aroused, to preserve the natural beauties of suburban New York.

As for London, in the East End the Thames is a trading center, but higher up it would have lent itself to embellishment in the shape of quays and promenades. Very little, however, has been done in this direction. Some embankments have been constructed in recent years, but throughout the greater part of the river's course it is disfigured by villainous buildings, the walls of which come down to the very edge of the water. Besides, the authorities have permitted the railroad companies to build their sidings over the Thames itself, and hundreds of freight wagons and passenger cars are always to be seen overhanging the river. Certainly London has not known how to utilize the natural beauties of the spot.

In Paris, on the contrary, the utmost has been made of the River

PARIS

A view of the Seine showing the quays and the trees in Old Paris.

View of one of the arms of the Seine bordering the "Ile de la Cité."

Seine. The river traffic is considerable, yet the construction of docks and warehouses alongside the water has not been allowed. Throughout the length of the Seine within the city limits there is a broad quay on either bank. In many parts there is a double quay, the lower one serving for the loading and unloading of merchandise, and the upper one for street traffic. Along each bank of the Seine run two rows of trees. What the municipal authorities wanted was a tree-lined river from one end of the capital to the other. The designs for all the bridges have also been decided upon by them, and the railroad companies, before carrying their lines across the

STATUE OF LOUIS XIV. ON THE PLACE DES VICTOIRES.

river, have had to submit their plans to the city engineers. This is why the Auteuil Viaduct, viewed from a distance, recalls to mind the aqueducts of the Roman Campagna. In the same manner, the city authorities have the last word in regard to the bridges which the Metropolitan Railroad Company is going to throw across the Seine. In Paris, no influences in favor of private interests can intervene to mar what belongs to everybody—the beauty of the city.

The treatment of the Seine in Paris affords a typical example of what can be done by wise and persistent action on the part of the city government towards preserving and developing natural beauties. The first photographs which we reproduce here give various views of the Seine: the arrangement of the quays and, in particular, the unbroken lines of trees extending along the river banks from one side of the city to the other. The photograph of

the celebrated panorama of the City shows a monster advertisement of a newspaper, placed on one of the houses standing on the island. Since this photograph was taken, a vigorous press campaign has had the effect of causing the removal of that advertisement, and it no longer disfigures one of the finest panoramas of Paris.

This leads us to note an important point, namely, that while a city cannot change its topographical position, it can, and should, make the most of that position. This is man's work, a work requiring Art, and hence the title of these articles: "Art in the City."

PLACE VENDOME, PARIS.

This photograph illustrates the placing of a monument in the middle of a square, and the effect of a uniform design for houses on a square.

A work of art calls for a persistent determination to carry out, patiently and in its minutest details, a pre-arranged plan; a work of art implies the exercise of taste; a work of art involves sacrifices. We will now see how a city can be a work of art. We will take Paris as an example, because, although everything there may not be absolutely complete and perfect, it is at any rate the place where the will to sacrifice much to beauty has been most persistent. And, if we compare New York with Paris, and the comparison should turn to the disadvantage of the former, let it not be looked upon as prejudiced criticism, but rather as an effort to stir up in American cities that same desire for embellishment which is so strongly characteristic of the French capital.

PARIS

Street leading to a monument
the Rue Soufflot and the Panthéon.

An avenue leading to a Monument
the Avenue de l'Opera and the Opera House.

THE PORTE S. MARTIN.

A triumphal archway on the Grands Boulevards, commanding the entrance to the Rue St. Martin.

THE AVENUE DES CHAMPS ELYSÉES AND THE AVENUE MARCEAU.

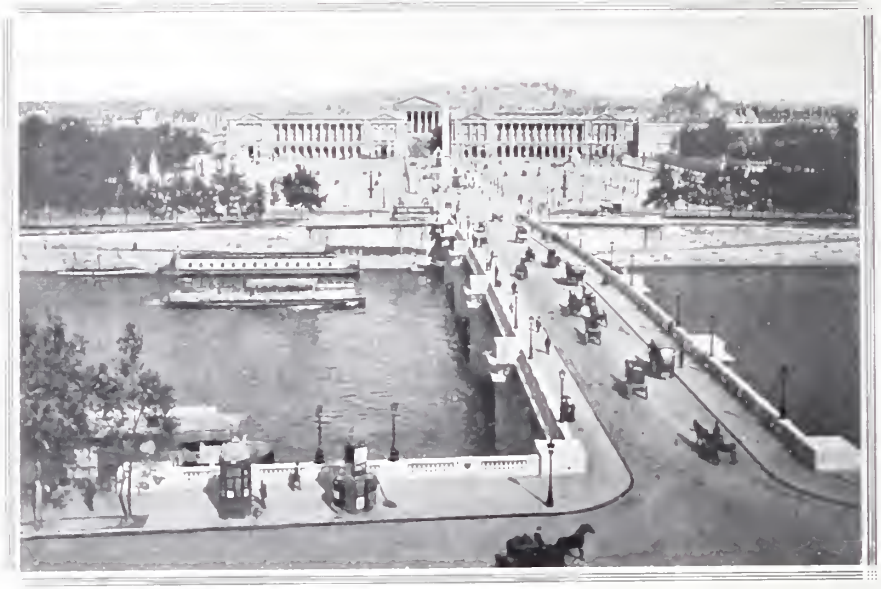
The Plan of a City.

THE PORTE S. DENIS.
A triumphal arch on the Grands Boulevards, commanding the entrance to the Rue St. Denis.

We know that, as a rule, a city grows and extends in a haphazard way, according to the needs of its trade, the wealth of its inhabitants, the configuration of the ground, and so forth. New York is a sad example of a city that had a pre-conceived plan. Washington, on the contrary, to which city Mr. Montgomery Schuyler has devoted an excellent article in the May number of the Architectural Record, was favored by having a great artist as its godfather. In most cases it is not so, and the city develops in a happy-go-lucky sort of way. Later on, the authorities intervene to straighten the streets, open up wide thoroughfares, provide squares and parks and erect monuments. This is where it is necessary to have sound and artistic ideas as to the manner of embellishing a city. Much money has to be spent, but money alone is not sufficient: taste is needed, and it is necessary to decide upon the proper measures at the proper time. London has not had this wisdom. Until very recently, it has kept those narrow streets which lead to the city, the heart of the capital, and now a great deal of money has to be spent beyond what would have been required had a scheme of improvements been worked out and put into operation forty or fifty years ago. As regards Paris, everybody knows what a great work was done by Napoleon III., assisted by Baron Haussmann, in the way of opening up broad avenues, so as to enable air and light to penetrate into every district. But they did no more than continue a task commenced before their day, as will be seen by the accompanying examples.

The Place of the Monuments in a Well-Designed City.

It is essential, in a tastefully arranged city, that the principal streets lead to monuments, which terminate them. This is a matter well understood in Paris for centuries past, but which is not yet grasped in New York. We have an instance of this dating as far back as the time of Louis the Fourteenth, namely, the statue of that monarch which stands on the Place des Victoires, which was so placed as to be visible along all the streets converging on that Place. The most celebrated instance, however, of



PLACE DE LA CONCORDE.

Example of a well-designed square, with the Madeleine in the distance and the Pont de la Concorde in the foreground.

a number of avenues all converging towards a monument, which terminates them, is undoubtedly that of the Arc de Triomphe of Napoleon I., leading to which are twelve magnificent avenues. In this way the monument, placed as it is on the summit of a small hill, is visible, at different angles, from twelve different avenues, for which it forms a splendid crowning. This is an excellent example of the arrangement of an entire district around a monument. But examples of the same kind abound in Paris, and illustrations of them will be found in the present article. We hardly need cite the Avenue de l'Opéra, terminated by the Opera House; the Rue Soufflot and the Panthéon; the Rue Laffitte and the Church of Notre Dame de Lorette; the Rue de la Chaussée d'Antin and the Eglise de la Trinité, and the Rue Royale, having the Madeleine at one end

and the Palais Bourbon at the other. The fact is that almost all the monuments of Paris are seen, as they ought to be, at the end of a street or an avenue. We beg the reader to examine, from this point of view, the illustrations accompanying this article. They show monuments which are extremely well known, but what we wish to lay stress upon is the manner in which these monuments are placed and the general effect they produce, together with the streets designed to display them.

In New York it is not so. In the modern city there is not a single monument that can be said to be suitably located—that is at the end of, and terminating, a street or an avenue. This is one of the most serious faults of the rectangular plan on which New York is built. Saving Grace Church, so admirably placed at a bend in Broadway—which bend must have vexed the souls of the engineers who planned New York and who worshipped right angles—saving Grace Church we say, all New York's monuments are located in the interior of blocks. For them there is no perspective: one only sees them when they are within a yard of one's nose. The result is that instead of embellishing the whole district surrounding them, they simply ornament one block; and instead of seeing them from a distance, one discovers them suddenly, right before one. A more unfortunate arrangement could not be imagined. And this brings us to speak of the rectangular plan, which we will do in our next paper.

Jean Schopfer.

FIGURE REPRESENTING SCULPTURE, PLACED ON THE FAÇADE OF THE EXPOSITION BUILDING.

Designer, Rubino.

L'ART NOUVEAU, AT TURIN.

An Account of the Exposition by M. Melani and a Member of the International Committee of Direction.

I.

TURIN is the first city in the world to assemble, at an international exposition, the products of various countries in the field of the New Art. Thus it has come to pass that Italy, so long indifferent to the modern æsthetic movement, will give the world a spectacle fit to win a pardon for its former apathy. As a matter of fact, our country is little inclined to receive the ideas aiming at a renovation of art. With us traditions are deep-rooted, and we have a marked tendency toward the old classicism, towards that style which is absolutely out of harmony with the aim of modern art. And then we have been told for a long time that Italy is the country of artists, and we the modern Greeks; thanks to the classicism with which we are imbued. We have taken all this seriously. We have continued on the same road and are trying to keep up the reputation that has been ours for centuries. Where we Italians are wrong, however, is in traveling very little and in being incredibly disinclined to move about. If we had the habits of traveling as they have it in England, for instance, and in the United States, we should have occasion incessantly to see and admire the art of foreign countries, and to recognize that there indeed exists outside of classicism an art or classes and styles of art, that do the highest honors to the artists and the times that have produced them.

However this may be, if the recent indifference in Italy towards the modern æsthetic movement does not correspond to the luxuriant productiveness of our Renaissance, it must mean that to a country may happen what often happens to individuals at a certain period of their lives; the latter stop growing and improving, and the importance of their careers is based on their past. This is happening to Italy, which is resting on the grandeur of her traditions, so much so as to renounce all progress and to protest against those who would urge her onward and prevent her from becoming a fossil.

It is for the reasons which I have just given that the exhibition at Turin has an importance from the national point of view far surpassing the importance of those other expositions which, alas, open too frequently in cities of the Old World and of the New. And it is interesting to observe the earnest manner in which this initiative has been taken by the young Turinese, who have been the soul of the exposition.

How the Exposition Started.

As early as in 1899 Venice conceived the idea of adding to one of its expositions of fine arts a section for modern decorative art in order to gauge the importance of the efforts which aimed at giving to our times an independent style; but our country, absolutely unprepared for this noble task, was not represented, and the Venice galleries were filled mostly with work from Scotland.

The failure was disastrous, and two years later the "Famiglia Artistica" of Milan, undertook the same task; limited, however, to Italian products. About that time, in January, 1901, the "Circolo degli Artisti" in Turin, took the initiative for an International Exposition of Modern Decorative Art, and this initiative met with a sympathetic response among the cultured classes and the people generally in Turin. In the presence of so grand an idea, which absorbed all interest from the narrow Milan project, our "Famiglia Artistica" abandoned its project, and this resignation, spontaneous, cordial, almost generous, was received at Turin with exclamations of appreciation. From that moment the Exposition that has just opened seemed an accomplished fact to its originators, and even to its mere friends.

A committee was formed, and inasmuch as it was composed of artists, and artists are bad managers, there was established, in connection with the Artistic Committee, a Managing Committee, predestined by its very nature to be in constant discord with the Artistic Committee. Public subscriptions were opened; a large fund resulting from a very successful general exposition that had been held at Turin in 1898 was placed at the disposal of the 1902 Exposition, and the city, the province and the Chamber of Commerce helped with more or less substantial amounts to realize the First International Exposition of Decorative Art. Thus equipped with funds increasing from day to day, the Artistic Committee appointed sub-committees in every region of Italy and even abroad. Even North America had one of its own, presided over by an Italian, the Director of the Metropolitan Museum of New York, General Louis Palma di Cesnola who had at his side as vice-presidents Mr. W. E. Dodge, Mr. F. Pratt and Mr. Whitelaw Reid, and as members, Mr. D. O. Mills, Mr. John S. Kennedy, Mr. H. C Fahnestock, Mr T. Cook, Mr. F. W. Rhinelander and many others.

The idea of these sub-committees was carried out successfully. Their object was to stir up the artists and manufacturers and induce them to get ready for Turin. Such stirring-up was the more necessary in Italy on account of the indifference of which I have spoken, and on account of the special form in which the Turin Exposition was presented. In general, industrial expositions are bazaars, where one finds by chance now and then something worthy

of interest and of study. The Turin Exposition, on the contrary, was to be, in its entirety and in its component parts, a genuinely artistic exposition, and not at all an assemblage of products of ordinary manufacture. In this respect the program of the Central Committee was very precise, and among other points it contained the following, which I give here translated:

"In order to avoid a useless repetition of the ordinary industrial expositions, we have decided that at our Exposition only original works shall be admitted, and such as represent an effort towards an æsthetic renaissance of Form, excluding all objects that are mere reproductions of existing styles or are produced by industrial manufacture not inspired by any artistic sense; leaving, however, at the same time to the exhibitors within the limits of this program the greatest freedom in expression and tendencies."

We may, indeed, say that these are few words, but good ones. And it is exceedingly interesting to see how the program, whose essential condition I have just given you, was conceived. It was decided at Turin to have an exposition of a new kind, and even the data of the program had to be in harmony with this meritorious purpose. Thus, instead of presenting to visitors a series of detached objects, dwelling-rooms (*degli ambienti*) were demanded, completely furnished, and we shall see hereafter that not only rooms are exhibited, but complete apartments, decorated, and furnished, rich in plaster and painting. Divided into three classes, the program laid down the following three principal subjects: The modern dwelling in its decorative elements; the modern room in its decorative ensemble; house and street in their decorative organism. Each class is divided into categories embracing everything relating to modern decorative art intended for the embellishment of house and street,

A competition was opened for designs for the Palace, while sub-committees in Italy and abroad were working incessantly at the success of the Turin Exposition; and Turin has had the satisfaction of seeing the extensive response which its invitations called forth from almost every part of the world. At our Exposition there are represented France, Holland, North America, Hungary, Switzerland, Sweden, Germany, Austria, Belgium, not to speak of England and Scotland, which, together with the United States, occupy one of the most conspicuous places. Nor will I say much of Japan, which exhibits in a special gallery; for the Japanese work, though very curious and suggestive, has been found everywhere for several years past.

The competition for the Palace was won from among eleven competitors by one of our architects, Mr. Raimondo D'Avonco, at present in the service of the Sultan, at Constantinople. This

D'Avonco, still a young man, has been always distinguished by the independence of his ideas, and his work has a character which discloses a vivacious and original imagination. Being in this sense more scene painter than architect, he changed as time passed, and in his designs for the Exposition he shows that his mind, although still quick and alert, has capitulated somewhat. In one word, those who know the architecture of the Vienna secessionists, of that school which has its centre in the capital of Austria, notice that D'Avonico as the architect of the Exposition Palace, has been carried along by his liking for the Austrian architecture. Having said so much, we must recognize that the Palace has rather a grand as-

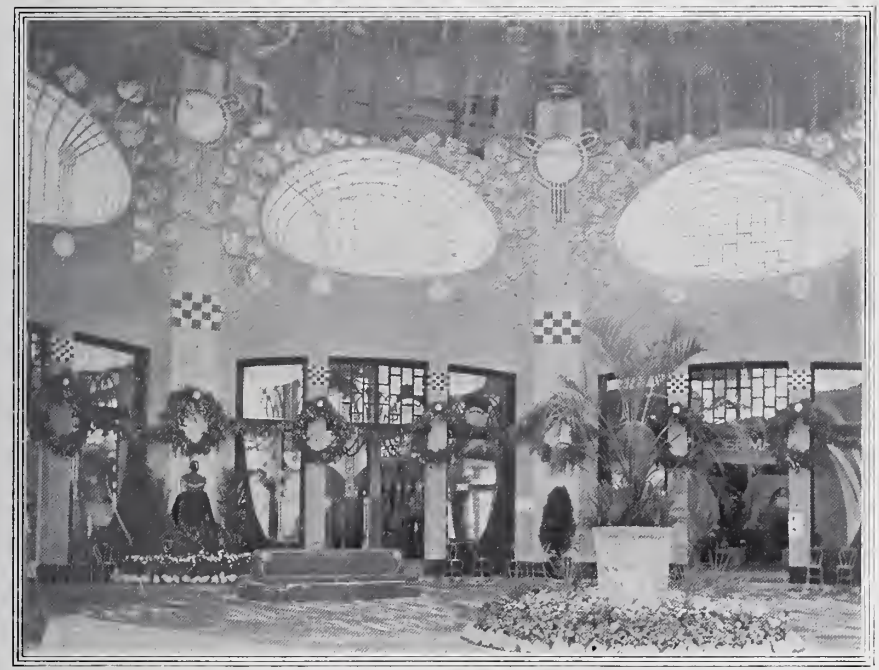
THE CENTRAL ROTUNDA OF THE EXPOSITION BUILDING.
Architect, Raimondo D'Avonco.

pect and that the interior of the central pavilion or rotunda is painted in a fanciful fashion. Color, and gold in particular, have been made use of rather extensively in the Palace by our architect. The sides of the pavilion have been more admired than the pavilion itself. I consider this opinion sound, because I think that the Palace is more impressive on its south and east sides, where the lines are less quiet and more expressive, than in its façade.

Aside from its secessionist inspiration, the principal entrance of the Exposition is a fine piece of architecture, which forms a special structure composed of two piles of brickwork and an iron gate. The two brick piles are yellow. Scroll railings in green form the

bases for roofs above, which throw a majestic shade over the two brick piles. The latter have received from their architect a large frieze, high up, of sombre coloring, and other details making an ensemble of a brilliancy difficult to define. Of course all this to be fully appreciated must be seen at Turin, in the Valentino, which is the paradise of this city, surrounded by that rich vegetation of trees and meadows, with the azure sky, that Italian azure which is constantly vibrating like an admiring and festive cry.

Mr. D'Avonco erected also almost all the other pavilions for the Exposition. Everywhere he showed his pictorial tendencies, very



INTERIOR OF THE CENTRAL ROTUNDA.
Architect, Raimondo D'Avonco.

appropriate, especially for such ephemeral structures as these are, and if he had forgotten his infatuation for the secession, his work would have been a more pronounced success.

D'Avonco's buildings appear less fine than they might, because his designs were executed by architects who have not the delicate artistic sense of D'Avonco himself. In several points where the designs are not clearly determined the structures do not realize altogether the vision of our architect, who came to Turin too late to be able to alter, amend and correct everything that he did not like in the structures he had conceived.

Austria alone among all the countries represented at Turin has

Turin
VILLA AUTRICHENNE
ENTRÉE PRINCIPALE
DE L'EXPOSITION DU CÔTÉ EXTÉRIEURE

erected a pavilion at her own expense. I mean to say, she built after the design of the architect L. Von Baumann, a small villa, which is decorated and furnished in a manner that, though not in any way extraordinary, yet attracts the attention of the public. Here Austria has made an exhibit of her own. When approaching the building we find on the right France, on the left England. North America is almost opposite England and close to Germany and Hungary.

Italy has naturally the first place at the Exposition, so far as space occupied is concerned. Two large galleries in front of the Rotunda are decorated in mauve tones in soft relief on a background of white, touched here and there with gold. These two large galleries are filled in great part with isolated furniture, the complement of the furniture that distinguishes rooms and apartments. These are in a place called "*delgi ambienti*" (interiors), which opens on the upper part of one of the two galleries. (I say two galleries, because the decoration makes this division; structurally, this is only one vast gallery.)

Besides the furniture, we find here exhibited ironwork, ceramics and embroideries, and we must say that Italy, though she has made an effort at emancipation from her artistic past, has fallen far short of making an important contribution to the æsthetic movement before us. This was to be expected; artists do not spring up over night, and a designer's proposal to turn out New Art, is not equivalent to the actual performance. Led astray by the old way of eclectic teaching, we have made the apprentices design in every style. Our industrial artists produce in great part the New Art in the same fashion as they used to produce work in the Renaissance or Louis XV. style. Thus, before we can have objects sincerely representing our epoch, we must form æsthetic consciences; we must begin by teaching what Art is; we must tell our designers that Art lives in the soul of the poet, not in the mind of those who change their style with the same facility as I, who to-day write with a steel pen, and may use to-morrow a goose quill.

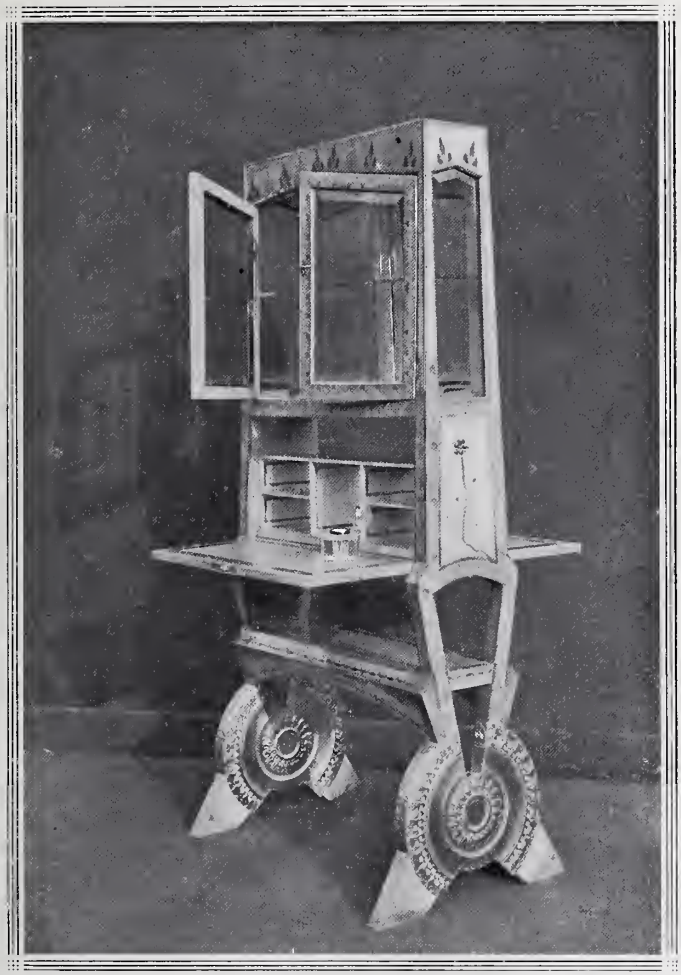
The Exposition of the Italians makes upon every free and modern mind exactly the impression I have just described. It is a pity, for Italy possesses the talent and the courage, but we shall have to be content for the present, in the line of New Art, with the products of artist manufacturers, if I may call them, who really are but craftsmen. Even among those artists who have a certain reputation there are some who yield to this dangerous opportunistic tendency, which reminds one of an old roué who colors his beard and hair in order to counterfeit youth. Here is a striking example:

In 1898 there was founded at Bologna, by a group of local art-

ists, together with some persons who took an interest in the advancement of decorative art, a society, the "Æmilia Ars" Society, (The archaic form of its name by itself inspires very little hope.) Their principal aim was to improve, from the points of view of art and of practical usefulness, the products of the decorative industries and arts, especially in so far as the furniture and decoration of houses is concerned, and also to increase by this means the business

WOODEN BENCH: DESIGNER, C. BUGATTI.

of artists, laborers and studios. An artistic committee prepares the designs and models that the artists execute. It aids, if that be necessary, certain clever laborers who have only limited resources, and, furthermore, it makes selections from among the works submitted for approval, which are placed on sale in a depot of the society at Bologna, even when not designed by members of the "Æmilia Ars" Society. The artistic aim of our organization is to



A SMALL DESK, DESIGNED BY BUGATTI.

produce either imitations of the antique or "New Art," but this "New Art" of the "Æmilia Ars," as we see it at the Turin Exposition, is in general nothing but an assemblage of ancient ideas, and I would say, of modern ones, if the floral decoration as it is applied by the artists of our society, were something novel!

Well, this Society, which, from the moral point of view, receives compliments from all sides, and which, from the point of view of Art, is far from representing a rich source of æsthetic activity in the modern sense, gives you the character of our New Art and explains to you by what confused tendencies we are diverted, and how much we in Italy lack faith in an independent artistic future.

However, we may wish that the manufacturers of furniture,

bronzes, lace, and silverware were all like those of the "Æmilia Ars," the majesty of Art, at least, should be respected. But to compare with the artists at the head of the Bologna Society we have at Turin ordinary manufacturers who work in "New Art" for the sake of profit exclusively, taking an idea here, stealing one there, following the ways of the English of the Belgians, of Van de Welde, or Walter Crane, or William Morris, in fact, even Olbrich, who,

DRAWING-ROOM FURNITURE, DESIGNED BY E. QUARTI.

though now triumphing at Turin, was unknown until recently to our craftsmen.

In short, the artists in wood among us who design furniture as artists, with a genuinely sincere love for the modern æsthetic movement, are small in number. Personally, I know but three, and three or four are all who are making an impression at the exposition of Turin, namely: C. Bugatti, E. Quarti, G. Cometti and A. Issel; two from Milan, one from Turin, and one from Genoa.

Mr. Bugatti is the most individual of the four, and the first in Italy to design furniture outside of the eternal Renaissance and Louis XV. So we are here in the presence of a real artist, a bizarre mind, who impregnates his art with a touch of Orientalism without knowing it. For I, who know Mr. Bugatti, can assure you that among the many things which he does not know, one is certainly

STUDIO CABINET, DESIGNED BY L. MONTI.

the Orient. Cairo, Granada and Toledo are places whose geographical existence even is perhaps unknown to Mr. Bugatti; and, he has never been to Rome, nor to Florence or Venice, nor even opened a book or studied photographs regarding the countries of the Orient. He is so truly an artist, our Mr. Bugatti, that if somebody should tell him that his work resembles something that already exists, he would destroy his model with an Olympic indifference. This shows that the Milan artist is guided in his visions, which are of an aristocratic fashion, by his instinct alone, and even

if his tendency be toward the Orient, his art is genuine Bugatti art.

In order properly to appreciate our artist, you have to know him. Even in Italy, even in Milan, where Mr. Bugatti appears always in most eccentric costume, there are many persons who do not believe in Bugatti's sincerity. But what proves that we have not to do with a sham is, in the first place, the genius of the artist, and then his utterly insufficient instruction. The exhibit of Mr. Bu-

BEDSTEAD, DESIGNED BY GRANZIOLI AND GANDENZI.

gatti at Turin is one of the richest, so far as furniture is concerned. Two dwelling-rooms, a drawing-room and a bedroom form as it were the ends of a file of furniture, different in purpose and design, representing chairs and desks, chests of drawers and card tables, writing tables and closets, arm-chairs and book-cases, cornices, châtelaines for ladies in pressed leather. The whole is connected by an ideal thread, and even where the line seems to you to be broken or the idea exaggerated, everywhere you find the trace of this thread, which shows you that the artist is always himself, exalted by the same vision, rich with the same inspiration.

Two styles, however, are found in the composition of the Bugatti furniture; the first is more loaded and less delicate than the second, which is the newer and the one principally exhibited at Turin. I am sorry that I cannot send you a photograph of the drawing-room, which has a character absolutely unique. It should be the joy, as we say here, of some fastidious and wealthy American. Fashioned in wood covered with parchment and painted with pink flowers and geometrical foliage, it is a vision rather than a room, fit to be from the scene of one of Edgar Poe's fantastic novels. The fantastic elements predominate always in the furniture of Mr. Bugatti. The purpose it is intended to serve and even the nature of the material are sometimes almost lost sight of, the artist being carried away by his idea to please the eye. Thus, the furniture in the second style of Bugatti—which, however, is a logical consequence of his preceding manner—is covered with parchment, and the soft tone of this skin is carefully preserved and almost put into relief by a red-and-green floral decoration. The latter has nothing English about it; sometimes it is a flowering branch, often a fashioned frieze. This *discreet* coloring is accompanied by metallic tones of certain discs, richly chased, which almost always form the constructive and decorative complement of the Bugatti furniture.

Not far from Mr. Bugatti's exhibit, we find the works of another Milanese, Mr. Quarti, who started with Bugatti. At the beginning he reproduced the Bugatti furniture (first style); later he made richer furniture, even too rich, which shows nothing of the profound individuality of Mr. Bugatti's creations, although it is executed with greater care. One might even say that in Mr. Quarti's furniture that his execution is superior to his imagination. However that may be, we have to do with furniture of a rare distinction. It is decorated with inlaid metal and mother-of-pearl. The colors in themselves give these life; but they are not productions within reach of that democratic class, that majority, the people, who every day demand that our society give them the tread of ideas and of feeling. Now, as for me, the New Art must think of this, and must get ready for this democratic class, and supply those pleasures which the people did not demand yesterday, but will eagerly seek to-morrow. Thus, in my view, Mr. Olbrich, even if he hold not the entire truth, yet comes nearer than Mr. Quarti to the final solution of the New Art. In short, Mr. Quarti, like Mr. Bugatti, is an artist in furniture, but either of the two, and especially Mr. Quarti, should have been contemporary with men like Boulle, Riesener and Caffieri.

Richness is a matter of course with almost all of our cabinet-makers as soon as they aim at artistic furniture. This is due to the fact that we are at the end of a period when artistic furniture was

made exclusively for the wealthy. Museum furniture and atavistic habits do not help to broaden us in our taste.

I have mentioned Mr. Olbrich, the master artist of the Darmstadt colony. This artist reminds me of Mr. Cometti of Turin, whose rooms and furniture, conceived in a large and sober manner, seems to belong to the Olbrich style. Mr. Cometti is a young decorator, rather modest and solitary, who had the good luck to find favor with Mr. L. Bistolfi, an eminent sculptor, one of the most active members of the Artistic Committee of the Exposition; he being a "modernist," helped his pupil on the way to the New Art. Mr. Cometti, becoming also the collaborator of Mr. Bistolfi, displayed at an early hour his naturalistic instinct. Starting as a sculptor, a clever worker in iron and wood, like his master convinced of the necessity of a complete renewal of the artistic surroundings, Mr. Cometti abandoned the field of pure Art, if I may say so, in order to take up the industry of artistic house furnishing. At present, he makes furniture, designs hangings, executes decorations. Work in wood especially has occupied his time. Thus, far from limiting himself to designing and modelling, he has erected adjoining his studio an establishment for the industrial art of furniture manufacturing where he himself instructs his workmen, aiding them when it is necessary in the smallest details of the craft. That is the way industrial art must be taken up, whenever one wishes to give it an artistic and individual character. Mr. Cometti, who even before the Exposition had produced quantities of furniture, surprised more than one of his confrères by abandoning Art for Furniture. Mr. Cometti is going to exhibit at Turin dwelling-rooms furnished in a very sure taste, backed by a sound judgment, which keeps Cometto away from all *bizarrerie*. Hence, as artist he commands logical and practical forms, and the form seems to grow spontaneously out of the very properties of the wood. These same results are also achieved by Mr. Olbrich, and perhaps for this reason alone the furniture shown by Mr. Cometti resembles that of Olbrich. It cannot be denied, by the way, that the furniture of our artist presented at Turin forms an advance beyond that which he manufactured formerly.

Among the young artists who have gone over to Industrial Art, I might mention even my pupil Mr. E. Monti. He studied at the High School of Industrial Art at Milan; later, he took up architecture at the Academy. At present he is manager of large furnishing works, where, however, industry is more important than art. It is true that Mr. Monti cannot be compared artistically to Mr. Cometti; but he has produced furniture that is outside of the traditional lines; at Turin, he has exhibited designs of the same.

A complete room for studio purposes, in natural oak, is a pretty

artistic and economical *ensemble*; and since the "Milan Famiglia Artistica" wished itself to exhibit, aiming at the important problem of combining economy and art, Mr. Monti has designed and executed for the "Famiglia" another room, whose price of 650 francs ($130) is rather modest, while the artistic character of the room is not without interest. We have here a studio in chestnut green, which is popular with the visitors of the Exposition. To sum up, Mr. Monti might be an artist of the New Art, but it is to be feared that commercial speculation will carry him away.

We have at Turin several large establishments, which, after having manufactured for many years furniture in the Renaissance and Louis XV. styles, are showing us, very solemnly, the spectacle of an æsthetic renaissance. But in general, these large establishments produce New Art only because its epoch has manifestly arrived. Artists whose soul and instincts are for the modern æsthetical revival, are few in number in Italy, so far as I know, and I ought to know it, having been one of the first, perhaps *the* first, among them, to advocate a complete change of Form. The enormous majority of Italian exhibitors of works in New Art are inspired only by opportunism, and what an art conceived in that way can accomplish I need not tell you.

Another establishment that has shown some good things is that of Messrs. Gandenzi & Grazioli, of Milan. Among their products is a bedchamber that is a little too architectural. Even C. Zen of Verona has something worth mentioning, but Zen is manifestly a manufacturer. I might also point out to you some furniture executed at Florence by Mr. Marshall Cutler, after designs by C. C. Girard. Though they show a tendency towards the Middle Ages, they represent a valuable contribution to the cause of modern æsthetics.

In a second article, I shall tell you of the wrought-iron work, of ceramics, embroideries, and I shall show you, in an *ensemble*, the most remarkable products of the Foreign States if, as I hope, this will interest you.

Alfredo Melani.

FIG. 1. THE LEANING FAÇADE OF S. AMBROGIO, GENOA.

Detail showing the oblique cutting of the angle pilaster. Photograph of the Brooklyn Institute Survey, 1901.

A RENAISSANCE LEANING FAÇADE AT GENOA.

IN several numbers of the Architectural Record magazine which appeared during 1896-7-8, announcements were made of surveys which have been carried out by the Brooklyn Institute of Arts and Sciences in various mediæval Italian churches and cathedrals. A summary account of the surveys was also published by the Brooklyn Institute in 1896, showing that hitherto unrecognized architectural refinements and subtleties are prevalent in many of these buildings.*

In the summer of 1901, these surveys in Italy were continued with important results. It had hitherto seemed probable that the mediæval architectural refinements, which had been discovered, had generally become extinct before the Renaissance, and the manner and cause of this mysterious extinction were one of the puzzling features of this study. In 1901, however, several instances of Renaissance survivals of the phenomena were observed. One of these is the case of a constructive leaning façade in the Renaissance church of S. Ambrogio at Genoa.

On the day of sailing from Genoa for New York in 1895 (after six months surveying work in Italy), a forward inclination of this façade was noticed, which appeared to be constructive. Among the various indications of constructive intention those at the southwest corner of the church are most easily described, because the side view is concealed on the southeast by an adjoining monastery.

At the southwest angle, as seen from the side (Fig. 1), the base courses, plinth, and mouldings were noted as level. On the other hand, the pilaster had a slight forward tilt, which appeared to be produced by masonry cutting. The front lower angle of each pilaster block appeared to be slightly obtuse, and the rear angle of each block appeared to be slightly acute (Fig. 1).

Of course, if the obvious lean (Fig. 3) had been due to settlement, then the base mouldings would have dipped downward toward the front.

There was no time, in 1895, to test these observations by the level. They were consequently not mentioned in an article which was published on constructive leaning façades in 1897; Architectural Record, Vol. VII., No. 3, "The Problem of the Leaning Tower of Pisa."

*Illustrated catalogue of the Goodyear Collection of Photographs of Italian Architecture and of the Survey of Italian Mediæval Buildings. For a complete list of publications by the author of this paper on the subject of the Brooklyn Institute Surveys and on architectural refinements, see the close of the article.

Genoa was revisited a year ago, especially for the purpose of testing these observations. The fact of the lean proved to be too obvious for dispute. The only question to be settled was whether it was constructive. Having settled this point by the use of the level and by careful examination of the masonry, it seemed to be advisable to have the facts corroborated by an Italian expert.

The expert selected was the architect now in charge of the church,

FIG. 2. S. AMBROGIO, GENOA.
General view of the Façade. Photograph of the Brooklyn Institute Survey, 1901.

Signor Luigi De Andreis, who has high standing in Genoa as an engineering architect. His certificate follows here:

Genoa, Piazza Invrea, 8. July 23, 1901.

Honored Sir: In accordance with your wish I now offer you some notes respecting the façade of the church of S. Ambrogio. This façade was constructed only in part, that is to say, in its lower half, near the end of the 16th century. Recently, in 1891, 1892, 1893, this existing portion was repaired, and the façade was finished by the addition of the upper portion.

While this work was going on the fact was ascertained that the lower part of the façade had a vertical inclination or lean of about twenty centimetres in a height of about fifteen metres.

The upper part was naturally built without any inclination. We cannot attribute the inclination of the lower part to the interior thrust of the arches or to any other cause of injury, since in that case there would have been partial distortions [of the masonry].

FIG. 3. THE LEANING FAÇADE OF S. AMBROGIO, GENOA.

The overhang is about 8 inches in 56 feet. Photograph of the Brooklyn Institute Survey, 1901.

On the contrary the given inclination is in a certain measure constant throughout the façade, while its decorations* are horizontal and not inclined in the direction of the lean. Hence it must be supposed that the façade was originally built with the aforesaid inclination.

Luigi De Andreis,
Architect directing the work on the façade.

The original Italian certificate is published in the Journal of the Archæological Institute of America, Vol. VI., No. 2, New Series. The facts being thus established their bearings have to be considered.

First, as to the purpose of this device, it can hardly have had any other than that of evading the effects of foreshortening. The same purpose which leads us, in hanging pictures, to tip them forward from the wall, would explain the wish of the architect to give the façade a slight forward lean. The same thing was done at an earlier date (15th century), with the pinnacles and statues on the top of St. Mark's façade at Venice, as attested by Commendatore Pietro Saccardo, who was in 1901 the engineering architect in charge of that church, and who observed this fact some years ago, as related in a later part of this paper.

The now vacant pedestal, 55 feet high, once belonging to a colossal statue of the Roman Marcus Vipsanius Agrippa, which stands before the Propylæa at Athens, on the left as one ascends the hill, has a very perceptible constructive forward tilt. The purpose of such an arrangement, especially in view of the approach from below, is self-evident. Vasari tells us, in his life of Michael Angelo, that this artist prepared the wall of the Sistine Chapel, on which he painted the Last Judgment, by giving it an additional coating, with a forward slope, amounting to one foot at the top. Vasari adds that this was done to prevent the settlement of dust, but it seems more likely that it was done to avoid foreshortening.

These various well-attested instances would enable us to understand the given device in the case of this Renaissance façade, and the instance of the Sistine Chapel offers a connecting link, as regards dates, with earlier cases.

This brings us to an interesting point connected with the date of the church and with its style. This date is comparatively recent, about 1590. And yet, although the architect was a Jesuit Father, the knowledge of his delicate device has not been cherished by the priests in charge of the church, and this knowledge has wholly disappeared in Genoa.

It is interesting to discover a certified case of a leaning façade of which the traditional memory has disappeared within the limits of modern history; since the year 1600, since the invention of

*Meaning the base mouldings.

printing and since the rise of literary record regarding architecture. Such an instance makes it easier to understand the disappearance of such traditions before printing, and before the literary record of architectural science was practiced.

Another phase of this matter is that of style. S. Ambrogio, at Genoa, stands on the border of the late Renaissance style. The great

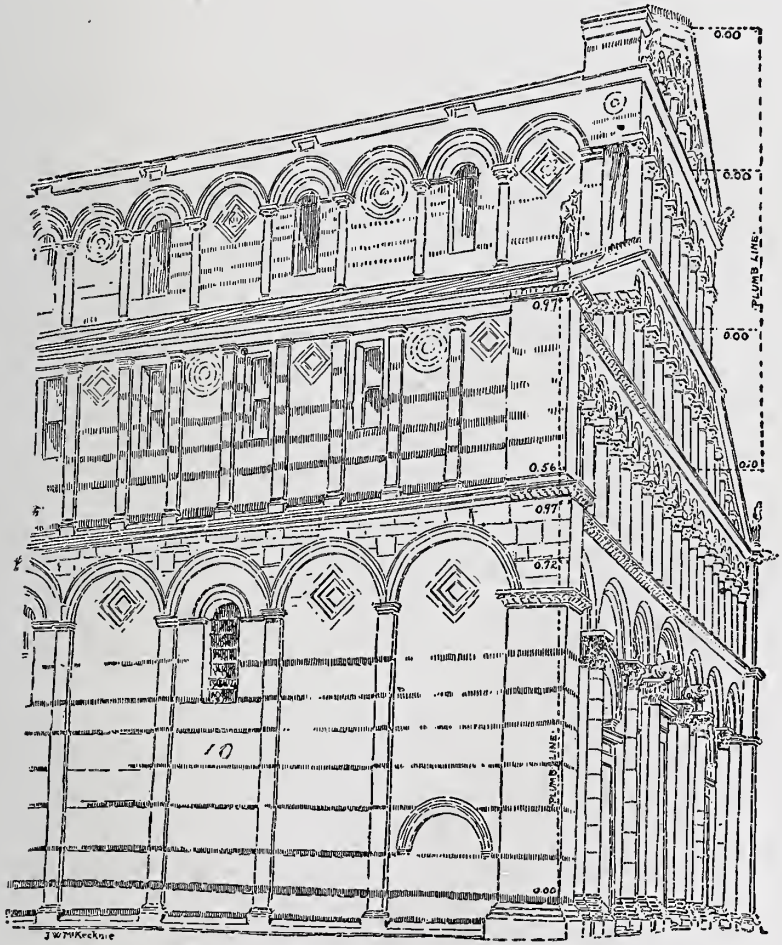


FIG. 4. THE LEANING FAÇADE OF PISA.

Republished from the Architectural Record, Vol. VII., No. 3. Measurements in foot decimals are entered on the drawing. The entire amount of the inclination is about 17 inches, with a return to the perpendicular in the three upper galleries. Tracing from a Brooklyn Institute photograph. See also Figs. 5 and 6.

rarity of such cases within the limits of the Renaissance period is undoubted. It is doubtful if there is another Renaissance leaning façade in Italy. This is, so far, the only country in which our search for such phenomena has been systematic or widely extended, and consequently the only country of which I can speak

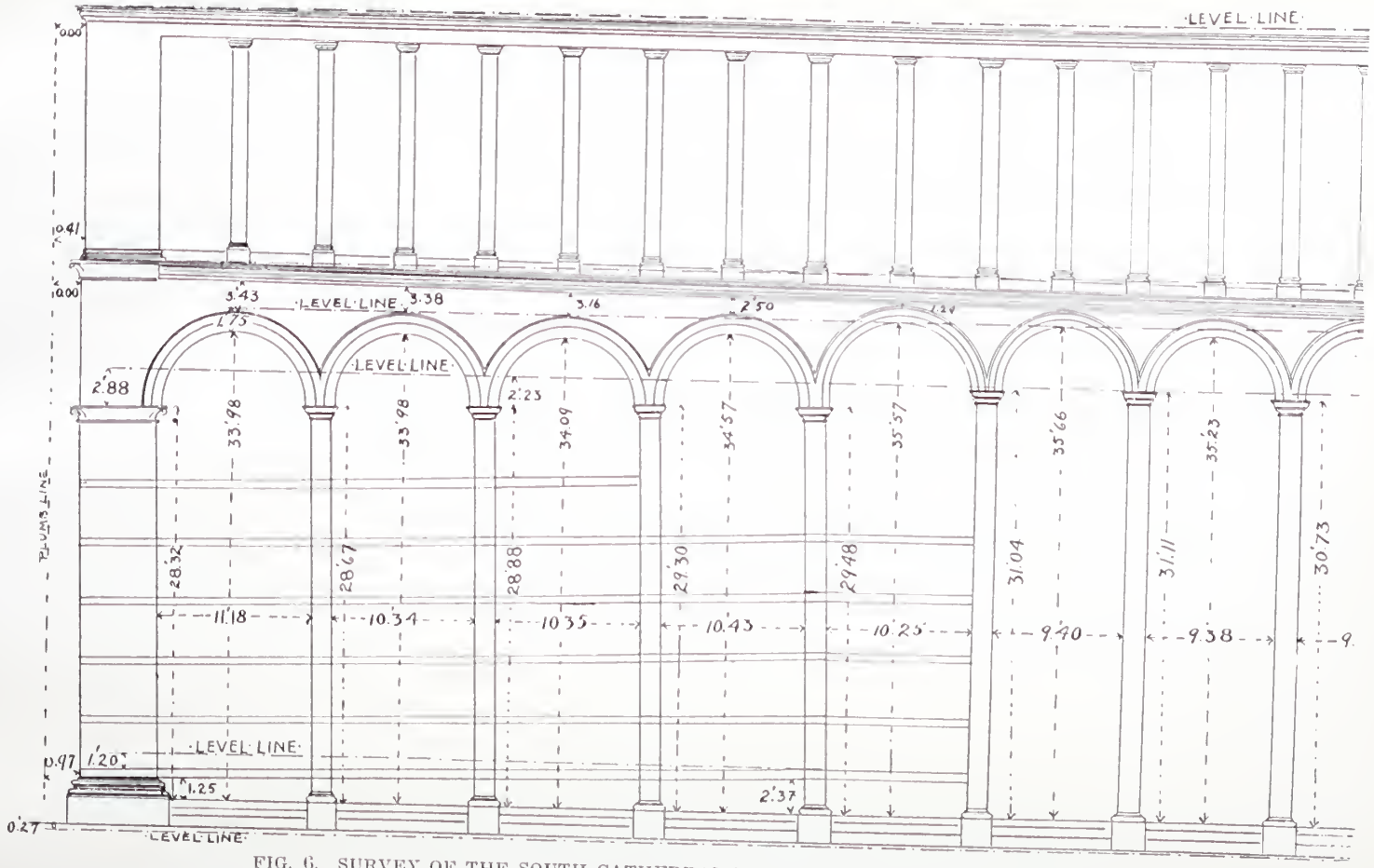


FIG. 6. SURVEY OF THE SOUTH CATHEDRAL WALL AT PISA, NEAR THE FAÇADE.

The measurements and levels show that the bend of the masonry stripes and the connected inclination of the façade are constructive. Measurements in foot decimals. Brooklyn Institute Survey of 1895. Republished from the Architectural Record, Vol. VII., No. 3.

at present with much security. It may, however, be considered probable that this is the only Renaissance instance in Europe.

In the articles which have been published on the mediæval phenomena it has been pointed out that they dwindle and become minimized in amount in the later Middle Ages; i. e., that they did not disappear suddenly. We are led back to this fact by the discovery of an apparently isolated case of a Renaissance leaning façade, because it is always easier to understand a gradual fading away of a traditional practice than it is to conceive of its sudden disappearance.

Leaning façades were certainly not numerous in Italy at any period. Careful search in a very large number of Italian towns, and including all of the generally quoted and better known churches of Italy, has revealed the following instances:

That of the Pisa Cathedral is the most remarkable (Figs. 4, 5, 6) on account of the abundance of evidence in the masonry cutting for the constructive intention. It was originally announced by me as a constructive leaning façade in 1874* on the strength of observations made in 1870. The evidence was strengthened to the point of absolute certainty by the surveys of 1895.† In 1901 this evidence of the published surveys was presented to Signor Annibale Messerini, the engineering architect now in charge of this cathedral. He examined the building with me, and his certificate is appended here.

The original Italian certificate is published in the Journal of the Archæological Institute of America, Vol. VI., No. 2, New Series. This certificate also covers other announcements concerning the Pisa Cathedral, which are found in the various articles which were published in 1896-7-8, in the Architectural Record:

Pisa, August 9, 1901.

Honored Sir: I have examined your measurements of the monuments of Pisa and am able to say that the proofs are complete for the following facts:

1st.—That the façade of the Pisa Cathedral was intentionally inclined in the original construction.

2d.—That all the curves of this building, both the horizontal and the vertical, were intentionally made in the original construction.

3d.—That the oblique lines of the interior galleries were built as they now appear.

4th.—That the main exterior cornice is oblique by construction.

With assurance of high regard,

Annibale Messerini, Engineer.

[Architect in charge of the Pisa Cathedral.]

The whole overhang of the Pisa façade is 17 inches, but it does not project beyond the forward edges of the great plinth blocks at its angles.

*"Scribner's Magazine," Vol. VIII., No. 4, 1874.

†Architectural Record, Vol. VII., No. 3. "The Problem of the Leaning Tower of Pisa," 1898.

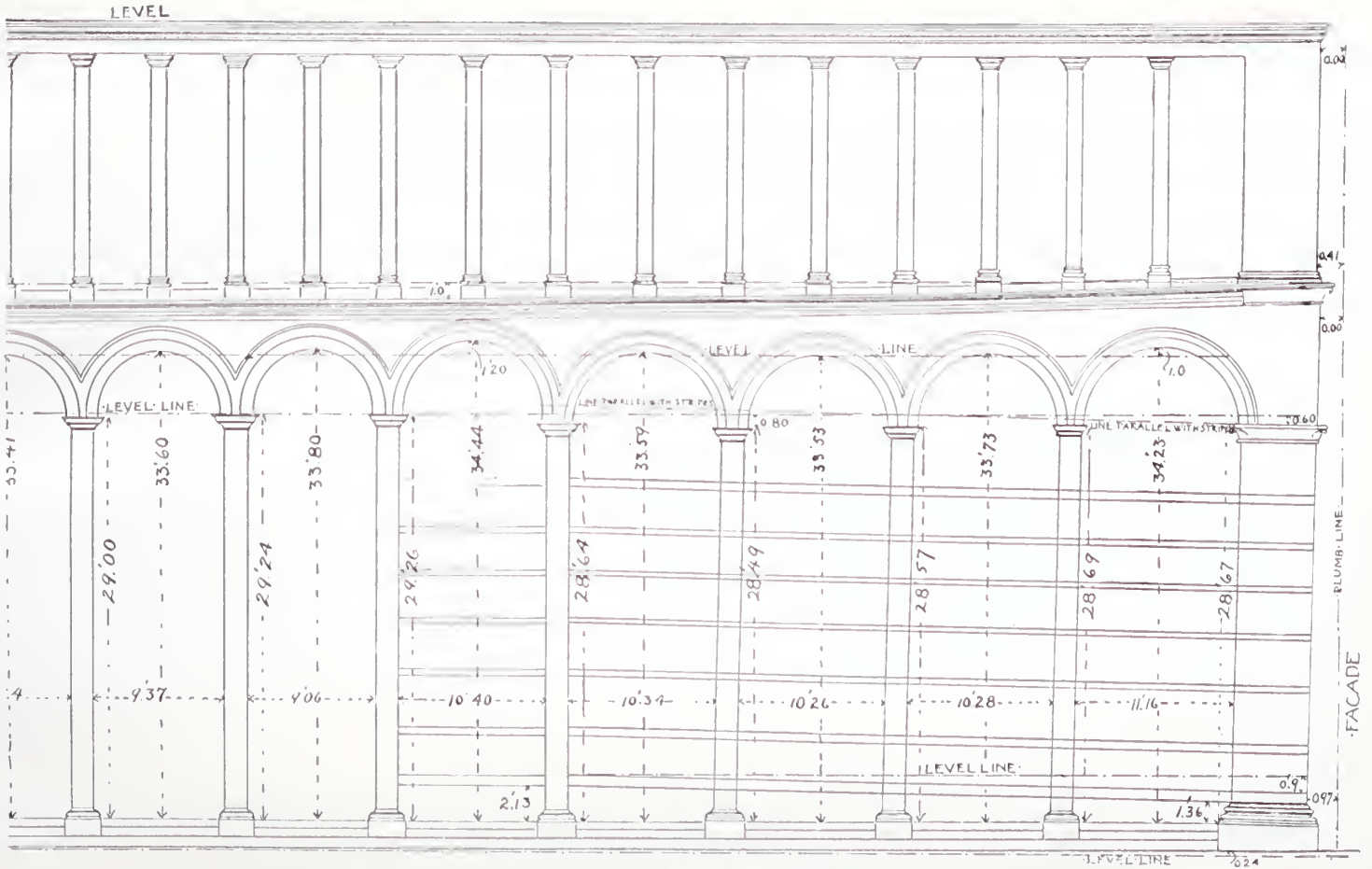


FIG. 5. SURVEY OF THE NORTH CATHEDRAL WALL AT PISA, NEAR THE FAÇADE.

The measurements and levels show that the bend of the masonry stripes and the connected inclination of the façade are constructive. Measurements in foot decimals. Brooklyn Institute Survey of 1895. Republished from the Architectural Record, Vol. VII., No. 3.

It straightens back to the perpendicular in the three upper stories. The third story (second gallery) only tips forward a tenth of a foot, and the two upper stories are perpendicular. This peculiarity of a return bend to the perpendicular is shared by the leaning façades of S. Michele at Pavia (Figs. 7 and 8) and of S. Ambrogio at Milan (Figs. 9 and 10), both of which are undoubtedly constructive. The return curve of S. Ambrogio is shown by Fig. 9, but the return curve of S. Michele (Fig. 8) is mainly above the limits of the photograph. It may be noticed on the left of the picture at the top. An enlargement of the negative up to 25 ″ × 35″, now in the Brooklyn Institute Museum, shows the beginning of the curve quite clearly.

As regards the constructive facts in S. Michele at Pavia, a photograph taken in 1901 is very effective (Fig. 7). It shows an upward tilting of the base courses. These mouldings would dip downward, if the façade had settled.

In Fig. 9, the return curve of S. Ambrogio at Milan is shown from the inside of the portico (second story) as being against thrust. As the return curve is constructive, of course the lean must be the same (Fig. 10). This lower façade thrusts against court arcades of the same date and is supported by them. The capitals of the piers have been observed as horizontal, although the picture does not show this. If the façade had settled, the tops of the capitals would dip downward. There is also conclusive evidence in the masonry cutting so far unpublished.

Notre Dame at Paris offers another instance of a front which leans out below and then straightens to the perpendicular (by an offhand change of direction, not by a curve). The inclination does not extend above the first story, and is roughly estimated to be about nine inches. Those who examine this façade in Paris should be careful to notice that the buttress masonry at the lower part of the northwest angle is a modern repair, and here the lean has been obliterated.

The facts regarding Notre Dame were hastily observed during the Paris Exposition of 1900. They were published in the Journal of the Archæological Institute of America, Vol. V., No. 1., New Series, 1901.

The leaning façade of the Ferrara Cathedral has already been noticed and illustrated in the Architectural Record.* This is the one important mediæval instance, so far observed, which shows a continuous forward lean (Fig. 11), as distinct from a return bend. There are no partings of the masonry on the sides, such as would have occurred if the foundations of the building had yielded. The amount of this lean appears to be about 22 inches in about 96 feet.

*Vol. VI., No. 1, p. 8; Vol. VII., No. 3, p. 287.

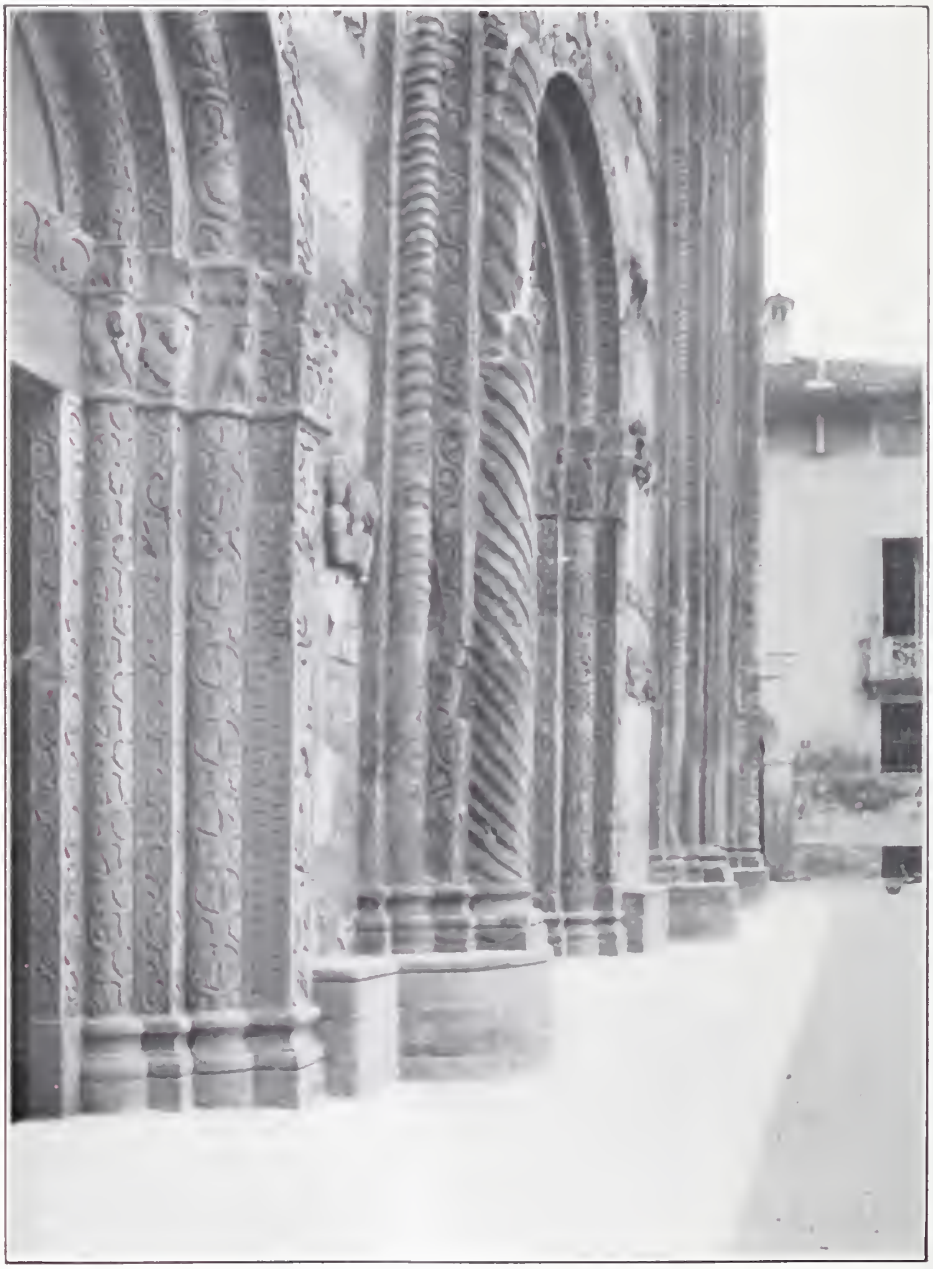


FIG. 7. THE LEANING FAÇADE OF S. MICHELE, PAVIA.

Detail showing the upward tilt of the plinth mouldings. Photograph of the Brooklyn Institute Survey, 1901.

FIG. 8. THE LEANING FAÇADE OF S. MICHELE, PAVIA.

The inclination is about a foot, with return bend to the perpendicular, which shows slightly on the extreme left. Photograph of the Brooklyn Institute Survey, 1901.

FIG. 9. RETURN CURVE OF THE LEANING FAÇADE OF S. AMBROGIO, MILAN.

Taken inside the portico of the second story. Photograph of the Brooklyn Institute Survey, 1901.

Thus we are able to quote, so far, four important mediæval instances, in Italy, of which three are certainly impregnable, and I have, personally, no doubt about Ferrara.

On the other hand, there are three leaning façades in Italy which must be considered as probably accidental. In the Cathedral of Volterra the south wall has bulged out so far, that it had to be supported by a building which was erected against it. This fact casts suspicion on the constructive intention of the leaning façade at Volterra, although there is, on the face of things, no reason why a building which was constructed with such a refinement should not also have met with an accidental mishap. There is a concave curve in plan in one of the upper faces of the Parthenon, which has been attributed by Penrose to the explosion which ruined the building. This has never been held by Penrose, or by others, to cast doubt on the existence of constructive curves in the Parthenon.

Two other doubtful cases are those of S. Pierino at Pisa and of S. Simone Juda at Lucca. The façade of the Madonna dell'Orto at Venice is very probably a good constructive instance. There is nothing to discredit it, excepting the fact of its being in Venice, where the foundations of buildings are supposed, without very good reason, to be peculiarly unstable. This façade curves back to the perpendicular, and this alone seems to establish constructive purpose. The observations of this church (in 1895) were rather hurried, and no plumbs were taken, so that for the present it must be considered as an undetermined case.

In 1901 I re-examined the small church of S. Giovanni e Paolo at Bologna, which is mentioned in the Architectural Record, Vol. VII., No. 3, p. 286, and determined that the lean was too slight for quotation. A hasty observation of S. Agostino at Cremona, made in 1895, has been mentioned on the same page of the Architectural Record. This church has not been revisited.

Some additional observations of 1901 for constructive leaning faces, are important, although they do not concern façades.

In the church of S. Francesco at Arezzo, where the choir is recessed, the walls on each side of the choir, fronting the nave, have a strong forward constructive slope. These walls had fresco decoration. A close analogy with the wall of the Sistine Chapel, above quoted, may be suggested for this instance.

The exterior of the choir of the Cathedral of Palermo leans out very remarkably at the cornice, apparently in order to evade the foreshortening of the fine decoration which is there applied. The choir of the Pisa Cathedral leans out as much as the façade, and also straightens to the perpendicular in the upper story. The upper part of the façade of S. Frediano at Lucca curves forward almost as much as an Egyptian temple cornice. It has mosaic deco-

FIG. 10. THE LEANING FAÇADE OF S. AMBROGIO, MILAN.

The lean amounts to 9 inches for the first story. Photograph of the Brooklyn Institute Survey, 1901.

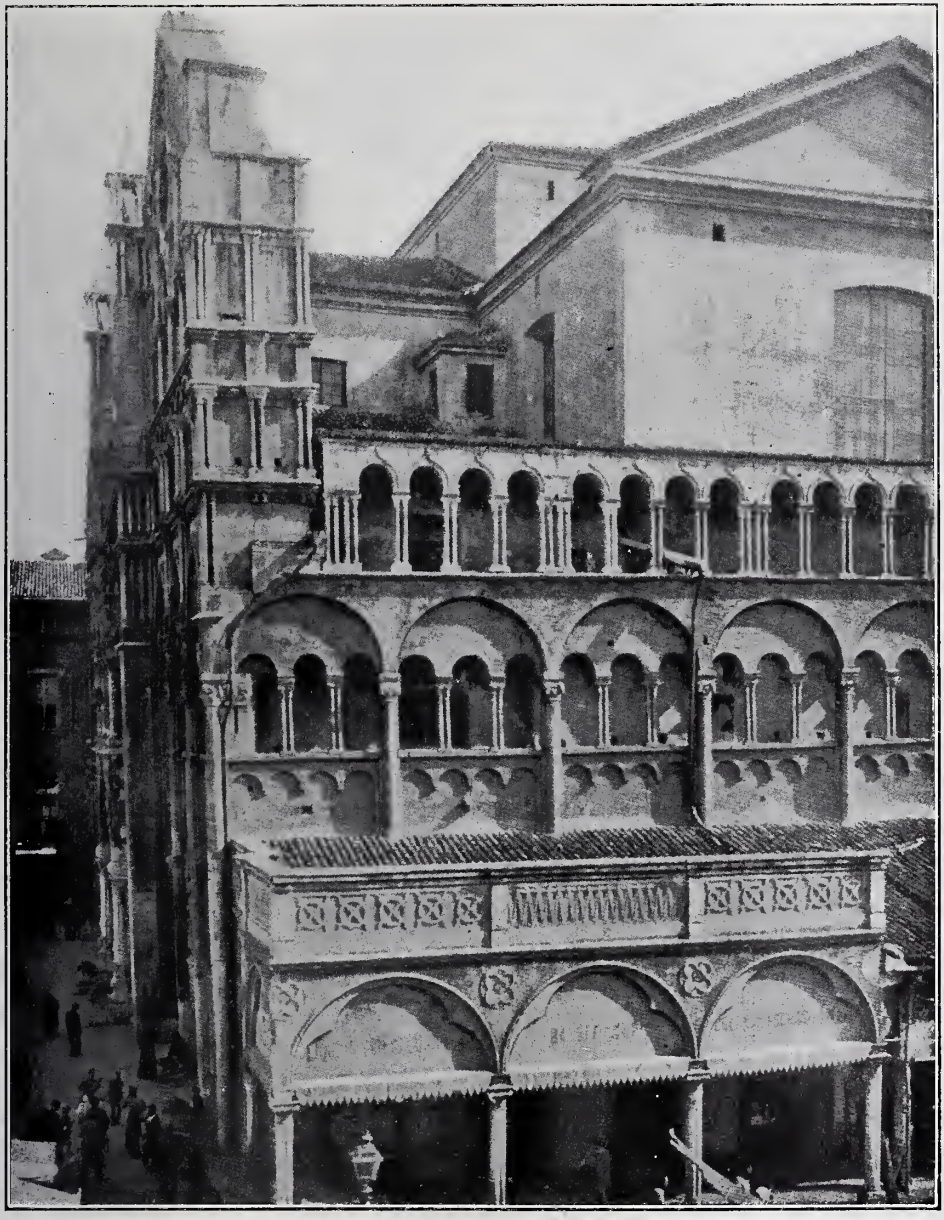


FIG. 11. THE LEANING FAÇADE OF FERRARA.

The lean amounts to about 22 inches in 96 feet. Photograph of the Brooklyn Institute Survey, 1901.

ration, and the avoidance of foreshortening was palpably intended. The instance to be finally mentioned is among the most important, because the constructive facts are now attested by an architect's certificate and because they have been so long ignored in the case of a church as famous as S. Mark's at Venice.

This instance was first observed in 1870, and was again observed in 1895. Publication was made in Vol. VII., No. 3, Architectural Record, but with a very unsatisfactory photograph. Four photographs were made in 1901, all of which show the plumb line. Figs. 12 and 13, are selected from them.

All the columns of the façade of S. Mark's on the lower story, lean out in similar fashion, excepting those at the southwest angle, which have been repaired by an architect now deceased, and ignorant of this refinement. The plumbs show tips varying from $2\frac{1}{4}$ to $3\frac{1}{2}$ inches in a height of $9\frac{1}{2}$ feet. The walls behind these columns are perpendicular. The columns of the upper row are perpendicular.

When these facts were pointed out, in 1901, to Commendatore Pietro Saccardo, the engineering architect then in charge of S. Mark's, he instantly recognized them as constructive, although he had not previously noticed them. He also furnished me with a certificate regarding the construction. This certificate is reserved on account of its inclusion of other phenomena, and will shortly be published in another connection.*

Although in this instance it is the columns which lean forward and not the wall, the facts are analogous to those shown by the bending or curving fronts of Pisa, Pavia and Milan. There is, however, this distinction. If the avoidance of foreshortening were the only consideration here, it would seem that the upper row of columns would also lean out. At Pisa, Pavia and Milan, and in Notre Dame, we might suppose the return to the perpendicular to be due to considerations of stability, but this consideration could not be imagined to apply to the façade columns of the second row in S. Mark's, because there was no sacrifice of stability in the tilt of the lower columns; the wall itself being perpendicular. The bend in the vertical would therefore appear to have been the controlling consideration, in this instance, and an aversion to the rigidity of the straight line would therefore be the proper explanation. This may consequently also apply to the cases at Pisa, Pavia and Milan.

This probability is strengthened by the interesting observation of Commendatore Pietro Saccardo, as to the forward tipping pinnacles and statues of St. Mark's, and as to the forward tip of the Porta della Carta. Since the pinnacles tip by construction the

*The original has been published in the Journal of the Archæological Institute of America, Vo. VI., No. 2. New Series.

perpendicular position of the second line of columns on the façade must be certainly significant of the preference for a bending vertical at that point. Otherwise they would also tip forward. On the other hand, the forward tip of the pinnacles and statues could only be explained as intended to avoid foreshortening. This must also be the explanation for the Porta della Carta.

FIG. 12. THE LEANING COLUMNS OF S. MARK'S FAÇADE, VENICE.

The leans vary from 2¼ to 3½ inches in a height of 9½ feet. The upper columns are perpendicular, as is the wall behind the leaning columns. Photograph of the Brooklyn Institute Survey, 1901.

The forward tip of the pinnacles was personally made known to me by Commendatore Saccardo as being about 6½ inches. We plumbed the Porta della Carta together, and found the tip to be 8 inches.

The fact that the architect, now deceased, who formerly controlled the repairs of S. Mark's did not understand, and did not repeat, the artifice of the original builders during his repairs was mentioned to me by Commendatore Saccardo. He also informed me

FIG. 13. THE LEANING COLUMNS OF S. MARK'S FAÇADE, VENICE.

The leans vary from 2¼ to 3½ inches in a height of 9½ feet. The upper columns are perpendicular, as is the wall behind them. Photograph of the Brooklyn Institute Survey, 1901.

that he was at this time a subordinate of the official in question, and that a controversy between them was caused by his contention that the repairs of the side façades had not been carried out according to the methods of the ancient builders. This controversy was carried into the Venetian daily newspapers and continued for ten days (1881). An account of this controversy will be found at p. 5 of a monograph by Commendatore Saccardo, entitled, "I Restauri della Basilica di San Marco nell' ultimo decennio," (Venezia, Tipografia Emiliana, 1890).

We now return to the consideration of the leaning façade of S. Ambrogio at Genoa, with the following conclusions:

(a) If the tradition regarding such a practice disappeared, as it did disappear, after 1600, there is no reason why the tradition should not have disappeared, for earlier buildings, such as the Pisa Cathedral; and one ground of incredulity regarding mediæval instances, viz.: the supposed unprobability that such a thing should have been done and then forgotten, no longer exists.

(b) The suggestion has sometimes been verbally made that the builders of the Middle Ages were not familiar with the ordinary mechanical methods of rectilinear building, but the builders of the late Renaissance have never been accused of lacking in formal accuracy. Therefore, if they did, for a purpose, deviate from the normal perpendicular, in one instance, there is no reason why the builders of the Middle Ages should not have deviated from the normal perpendicular, for the same purpose, or for some other purpose, in other instances. In fact, the isolation of the Renaissance example can best be explained as a rare survival of a practice which once had greater currency. It is especially for this reason and as bearing on the announcements which have been previously made for mediæval buildings that this paper is published.

William H. Goodyear.

Publications by the Author, on Architectural Refinements and on the Brooklyn Institute Surveys of Italian Mediæval Buildings.

1874. Scribner's Magazine for August, "A lost art."

1895. Architectural Record, Vol. IV., No. 4.—"A discovery of horizontal curves in the Maison Carrée at Nimes." The observations in Egypt are included in this paper.

1896. Smithsonian Report for 1894.—"A discovery of horizontal curves in the Maison Carrée at Nimes." The observations in Egypt are included in this paper, which is a reprint from the above.

1895. American Journal of Archaeology, Vol. X., No. 1.—"A discovery of horizontal curves in the Maison Carrée at Nimes."

1896. Illustrated catalogue of the Goodyear Collection of photographs of Italian architecture and of the survey of Italian medieval buildings; published by the Brooklyn Institute.

1896. Architectural Record, Vol. VI., No. 1.—"Optical refinements in medieval architecture."

1896. Architectural Record, Vol. VI., No. 2.—"Perspective illusions in medieval Italian churches."

1897. Architectural Record, Vol. VI., No. 3.—"Constructive asymmetry in medieval Italian churches."

1897. Architectural Record, Vol. VI., No. 4.—"A discovery of horizontal curves in medieval Italian architecture."

1897. Architectural Record, Vol. VII., No. 2.—"An echo from Evelyn's Diary." A discovery of the walls and piers of churches which "recede outward," as mentioned by Evelyn for the old St. Paul's in London, or in other words, the phenomenon of outward spreading piers and walls.

1898. Architectural Record, Vol. VII., No. 3.—"The problem of the Leaning Tower of Pisa" and the discovery of leaning façades.

1898. Scribner's Magazine for September, Vol. XXIV., No. 3, p. 38.—"Newly discovered refinements in architecture;" in "the Field of Art," with comments by Russell Sturgis.

1898. Architectural Record, Vol. VIII., No. 2.—"Unknown Italy." (Architectural researches in Apulia.)

1899. Architectural Record, Vol. VIII., No. 3.—"The cathedral of Troja." (Architectural researches in Apulia.)

1899. Architectural Record, Vol. IX., No. 1.—"Horizontal curves in Columbia University," with an account of the literature of horizontal curves.

1900. Journal of the Archaeological Institute of America, Vol. IV., No. 1.—"An unpublished survey of the Pisa Cathedral."

1901. Journal of the Archaeological Institute of America, Vol. V., No. 1. —"The leaning façade of Notre Dame, as compared with that of Pisa."

1902. Journal of the Archaeological Institute of America, Vol. VI., No. 2, New Series. "Architectural refinements in Italian churches;" with certificates from Italian experts.

NOTE.—Through the courtesy of the Trustees of the Brooklyn Institute of Arts and Sciences, the Architectural Record is able to publish the article above, coincident with the appearance as No. 1. Vol. I. of the "Memoirs of Art and Archæology of the Brooklyn Institute Museum."

NEW YORK HOTELS.

II.

The Modern Hotel.

NOTHING could mark a greater difference than that between the pre-Revolutionary and the great modern hotel. It is the difference, as we explained in the first article, analogous to the difference in the general wealth, comfort and substantial progress between the two periods. The mechanism of a modern hotel is an expression of the most ingenious planning in the world. In that respect nothing could be greater except perhaps the planning of the modern steamship.

In a general way the most recent tendency underlying the development of hotels is to include within the walls of the building all the possible comforts of modern life, facilities which formerly could be found only outside of the hotel walls. Telephones, Turkish baths, private nurses, physicians, every conceivable necessity and luxury which formerly could not be found within the hotel is today a part of it.

The old New York hotel was a spacious home where people returned year after year, where they knew the proprietor, clerk and the office boy. There was something personal and *gemüthlich* about it. All that is now changed. The modern hotel is a great institution. Its keynote is impersonality.

In the first place, the modern hotel must be as large as possible; otherwise it cannot pay. As people demand almost everything now in a hotel in the way of luxury and comfort, the running of the house is a most expensive proposition. Accordingly the business done must be on a huge scale. A prominent architect of the city said that in the case of a hotel built by him where the house was not an enormous caravansary, failure for a time was the result. A new wing, however, was built making the house nearly twice as large. The increased business was so great without a commensurate increase of highly paid employees that the hotel became profitable.

It is hard to imagine the personal element connected with large institutions in which even the amusements of life are furnished. Popular receptions, lectures, and even spectacles can now be obtained without leaving the building. It is not at all improbable that in the next few years a hotel will be built with such an enormous open court that a colossal Hippodrome may be set up within

the building. Already, of course, the spacious roof with music and vaudeville entertainments is a commonplace. Not only all the comforts of home, therefore, but all the comforts and luxuries of the city are gradually included in the modern hotel. It would be safe to say that the Waldorf-Astoria which is built and arranged on such a huge scale will be the most eminently successful house until other hotels on the same scale are built. There are in this colossal building room for fifteen hundred guests who require almost as many servants. The enormous electric plant, 3,000 horse power, 16 elevators, a plant making fifty tons of ice a day, boilers using 100 tons of coal a day, 1,300 bedrooms, 150 hall-boys, 400 waiters, 250 chambermaids, 40 public rooms decorated by some of the best artists and fitted up with every conceivable variety of appointments, gives only an inadequate idea of its scale; but everybody knows the Waldorf.

Modern as the Waldorf-Astoria is, there are several hotels now being constructed which naturally will include a number of variations in hotel construction and appointments.

A large hotel designed mainly for family use is to be built adjoining the University Club on 55th Street and Fifth Avenue. In several respects it marks a departure not only in hotels but in building generally in New York City. One important feature is inspired by European rather than American ideas. We all know how woefully individualistic our builders have been, resulting in a mass of fragmentary, inharmonious, clashing architecture, no attempt being made to work in common for the sake of beauty and uniformity. This great projected hotel of eighteen stories is designed to harmonize with the adjacent University Club, which is a fine piece of architecture. The architectural lines of the hotel will follow the lines of the University Club. The same centre line will make a continuous arcade of five openings in the club and five in the hotel. The stone balustrade will be carried out on the same lines of the present balustrade of the club. Thus the whole block will be tied together. The general scheme of architecture is also the same as that of the club, being Italian Renaissance as far as possible in an eighteen-storied building. An unusual architectural advantage is that the lines and finishings will be carried out on all sides of the building, there being no blank wall, as is usually the case. The size of the lot is 100 by 25 feet, and in the 100 feet on the Fifth Avenue side there are only five openings, which means a very unusual allowance of space. The dining-room story is to be 27 feet high, and the story of the private dining-rooms 17 feet high. The dining-room opening on the avenue, which is clear across the lot, is much larger than Sherry's, 45 feet by 95.

In almost every detail of this hotel the idea of privacy so desir-

THE LATEST EXAMPLE OF THE FAMILY HOTEL.

Now being erected at the southwest corner of 55th Street and 5th Avenue.

New York City. Hiss & Weekes, Architects.

able in the case of family hotels is carried out. There are many sitting-rooms whereby people can avoid staying in the public vestibule. There are many elevators while the public stairways are not as obvious a feature as they are in other great hotels. In the basement there is a small Turkish bath, with elevators running down to it, designed particularly for the use of people in the hotel. They can go down to it and return without passing through the public corridors. To the ballroom on the first floor there is a private elevator, and on this same floor also a private pantry and dressing-rooms and banquet hall as well as buffet supper and smoking-room. On the next floor the secluded idea of the hotel is carried out right through the series of private dining-rooms, each with its own service. There is also a large public room where the guests may receive visitors. On the first floor of the apartments, is a wing more or less cut off, containing a dining-room for children and maids, so they need not go to the restaurant floor at all. There are fifteen floors of apartments arranged in suites that vary from two rooms to the whole floor, containing twenty rooms, if the guest desires. That indispensable part of a modern bedroom, a bath, is provided in almost every case.

A new feature to the hotel and one that carries out the idea of privacy are the three elevators that run from the kitchen below to the top floor, opening to little pantries connected with the suites, so that in every floor of these rooms the guests obtain private service from the kitchen. They are supplied with warming boxes, so that the food can be kept hot. In most other hotels there is always a great passage of victuals through the halls. An additional advantage of this arrangement is that all rooms are shut off. In a wing of several of the stories are the maids' rooms, supplied with large bath and toilet rooms and furnishing all the comforts of home. This has been brought about, the architect of the hotel said smiling, by the servant problem. Another indication of the modern character of the hotel is that there is no wood to be used in the construction. The floors will be built of non-combustible material, even the doors and window boxes will be of metal, so that nothing can burn except the furniture.

The architects of the hotel had in mind particularly the general idea of privacy. For that reason, all is designed to be rich but not gaudy, from the simple harmonious external to the interior appointments. Simplicity and sobriety combined with the anticipation of every need has been the end sought.

Another great modern house called the Hotel Belmont is to be built opposite the Grand Central Station, on Park Avenue, between 42d and 41st Streets, where excavating is now going on. It is said that this will be the largest hotel in the city in capacity next to the

Broadway, between 66th and 67th Streets. HOTEL MARIE ANTOINETTE. C. P. H. Gilbert, Architect.

Waldorf-Astoria. There are several remarkable features to this hotel, which will consist of twenty-six stories, five of them under ground. The sub-surface division of the hotel is a decided novelty, and is necessitated by the underground tunnel, which turns from Park Avenue up 42d Street, thus cutting off a large section of the lot.

The site of this hotel is supposed by the builders to be one of its most attractive features, situated as it is right opposite the station and connecting directly with the subway. In order to take a car in the underground tunnel it will not be necessary to leave the hotel, there being a subway station at Park Avenue and 42d Street. As opposed to the hotel next to the University Club the Hotel Belmont is intensely public in its character, and it has laid very little emphasis on the architectural decoration. The main entrance to the hotel will be on 42d Street, the ladies' entrance on Park Avenue. The entrance into the restaurant and cafe are on 42d Street. The basement is of granite and the next two stories of limestone. The remainder of the building will be of Harvard brick with trimmings of terra cotta. As there are to be five stories underground, elevators, pumps, engines, tanks, machinery in general require particularly nice arrangement in disposition. There will be a refrigerating plant sufficient to produce 75 tons of ice a day, a large ventilating plant in the mezzanine of the cellar where the air is filtered and brought to the fans whence it is pumped into the various parts of the building in ducts. The garbage is disposed of by a special furnace. The floor above the cellar, still underground, is a laundry floor. Then above that the servants' dining-room floor containing besides the dining-room, refrigeration plant, butcher shop, many storerooms, with infinite subdivisions such as in the Waldorf-Astoria. Into these underground floors elevators and dumbwaiters descend to every department. Some of the dumbwaiters or ducts are used to send down soiled linen from the dining-room to the laundry below, where it may be washed, dried, sent back to the dining-room and used within ten minutes from the time it left the guests.

The grill room is entered from the street four steps below the ground. The guests may enter the hotel from the passageway under the sidewalk if they desire. There is a bar, free lunch, and refrigeration for bar, so that there will be no taste of pipes. As in every modern hotel, there will be pneumatic tube service, telephones throughout, one telephone being in almost every one of the thousand rooms. A convenient feature of the hotel is that guests can cross directly to the Grand Central Station by underground passage, thus avoiding collisions with trolleys, bicycles and carriages. The public rooms, reception rooms, parlors, lobbies,

etc., are all to be particularly large and spacious. The great lobby has been planned to be as open as possible. Then there are to be the usual palm room, gorgeous dining-room, etc. Above the second floor the stories are devoted to bedrooms with their attendant bathrooms and elevator and dumbwaiter service. All the bathrooms are to be ventilated by fans running up to the roof. The story beneath the roof is for another laundry. This one is designed for the use of the guests and will be by hand. There is an open space under the roof where the vents and a separate bathroom exhaust enter.

Another large modern house about to be erected will be on Longacre Square, called the Hotel Astor, and will occupy the entire block from 44th to 45th Street. It will extend 162 feet down each street, and will cover 33,000 square feet of ground. From the hotel one may get a clear view down Broadway to Herald Square and beyond, besides the full breadth of Longacre Square. As the hotel will stand alone, three sides will be completely decorated. It will consist of nine architectural stories. The façade will be in the style of modern Renaissance. The material will be limestone and red brick. The building will be crowned with a high curved mansard roof of slate and copper, with massive stone dormers.

There is one feature of this hotel that is very interesting from an architectural point of view. There is nothing forced. When you have a balcony you can get out on it. Private dining-rooms on the ninth floor really open on the cornice balconies, instead of merely appearing to. The mansard roof follows the cone of the ballroom ceiling and the breaks on the front indicate the bays of the plan. There is, therefore, nothing put on for looks on the outside that does not have relation with the inside.

The entrance will consist of three great cove arches three stories in height, which will open outside on a broad platform 100 feet long raised a few steps above the sidewalk. From this platform several entrances lead to the hotel. There is also a ladies' entrance on 45th Street and an entrance for dinner parties on 44th Street.

Another feature of this hotel which, so far as its mechanical arrangements are concerned, necessarily varies little from the hotels already described, is the decorative scheme. In the sub-basement spacious wine cellars are decorated in German fashion forming a picturesque private dining-room. Above is the basement, where a dining-room 150 feet long is vaulted and decorated like a German Rathskeller. Behind the grill room is a marble foyer with passages leading to the barber shop and toilet rooms and two flights of marble stairs to the main lobby on the floor above. Back of these rooms there is a space over a hundred feet deep and 230 feet long, extending under the sidewalks from the curb on 44th Street to that

on 45th Street, which is to be devoted to kitchen, pantries and stores. These kitchens, the largest of their kind, are to be open and free from disfiguring pipes. There is a novel device for noiselessly and automatically removing used china, linen, etc., from the dining-rooms, so that the waiter does not have to leave the room, thus largely increasing the time of his attendance at the table. Wherever convenient a conveyer is to be placed in each dining-room. The conveyer is an endless chain of shelves moving very slowly. The waiter simply steps to the nearest conveyer and leaves the dishes on the shelf which takes them below to dish-washing machines, and then returns them.

On the right, towards 45th Street, is the ladies' side of the hotel with dining-rooms, cloak rooms, reception room, reading and writing rooms, etc.; and a special entrance for women with two elevators and an entrance to the Palm Garden. To the left is the men's side with dining-room, bar and cafe, and an entrance to the two large elevators leading to the private dining-rooms on the ninth floor. All rooms on the ground floor are handsomely decorated, those on the ladies' side in the French style, those on the men's side follow English and German models. The lobby is largely of marble and bronze, the palm garden is trellised, giving the effect of a conservatory.

Above this floor are the seven bedroom floors, 600 bedrooms and over 400 bathrooms. The second floor contains ladies' parlors and state suites. On all of these floors the corridors are carried through to the outside air. There are no shafts; all the rooms and baths open directly on the front of the two courts, which are 26 feet wide. The elevators land in a lobby into which no bedrooms open and which is divided from the corridors by glass doors. The ninth floor is under the mansard roof, is devoted to private dining-rooms and appurtenances. Here there is to be a banquet hall for 500 diners and a ballroom and college hall and twelve private dining-rooms. The banquet and ballrooms are to be finished with groined arch ceilings and elaborately decorated. Some of the dining-rooms will be decorated in a way typical of outdoor sports, college life, etc., similar to one of the rooms in The Arena, the manager of which, Mr. Muschenheim, will be the manager of the new hotel. The cornice balcony extending entirely around this floor will give splendid views of the city. There will be on this floor also a separate kitchen for banquet and dining-rooms and above it a large laundry, and the roof will be arranged for a garden. All the public rooms are to be mechanically ventilated and the temperature automatically controlled.

Since the fire in the Park Avenue Hotel, projectors of new buildings have had particularly in mind the lesson to be derived from

Long Acre Square, New York City.

HOTEL ASTOR.

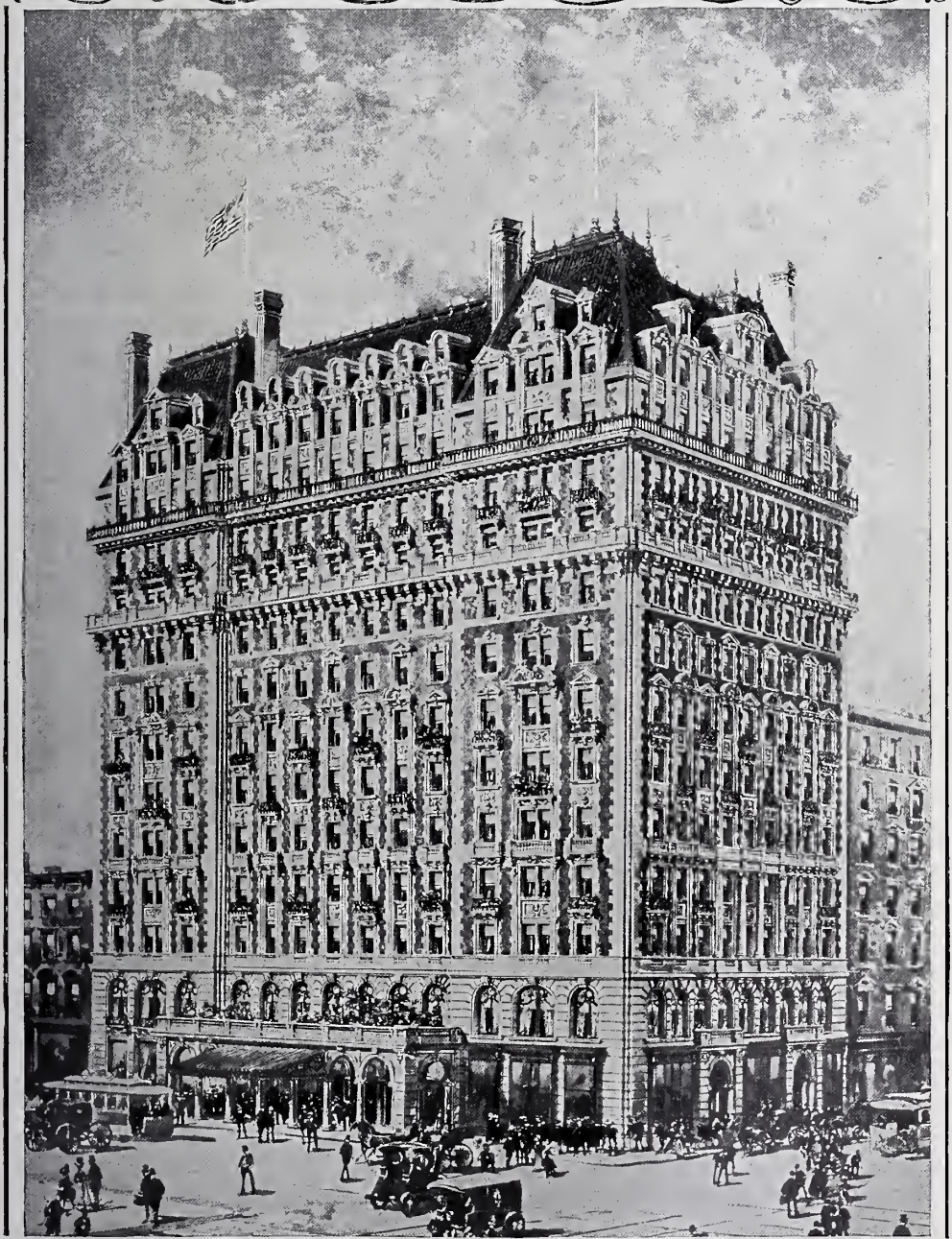
Clinton & Russell, Architects.

that accident, viz., that in a supposedly fireproof hotel great loss of life may take place from fire. No matter how non-inflammable a building may be, there is yet enough in the way of hangings and furniture to cause smoke, panic and resultant death. In the case of the Hotel Astor all the elevators and stairways will be inclosed with fireproof wired glass screens and doors, either closed simultaneously on the sound of the first alarm or closed automatically as soon as a certain temperature is reached, thus cutting off each floor entirely from all the others and making the stairs and elevators genuine fire-escapes. The stairways are so arranged that in case of fire a guest needs only to run away from the flame. Wherever he runs he will meet a stairway.

Another new hotel, plans for which have been drawn, will be called the Knickerbocker. It will stand on the site of the old St. Cloud, with additional ground giving an entrance from 41st Street for service. It will be fifteen stories in height, constructed of gray limestone, red brick and terra cotta in the style of the modern Renaissance. A very large amount of space will be allotted for offices and service. As is usual in such buildings the underground space will be occupied by a basement and sub-basement, but an unusual feature has been developed by the new subway for rapid transit. Entrances to the hotel are provided in the basement both to the main corridor and elevators and to the large Rathskeller which is located at the 42d Street corner. This arrangement will enable the guests to use the rapid transit system directly from the hotel without passing through the street.

The general arrangement is the same approximately as at the other great modern hotels. In the sub-basement are to be the cooking and ventilating apparatus with dynamos, refrigerating plant and all machinery necessary to the working of the hotel. The basement will be devoted to the Rathskeller, and will also have the barber shop, bootblack quarters, lavatories, kitchens, stores with their incredible diversity of subdivisions and other service departments. On the first floor are to be the huge foyer, office, waiting and reception rooms, dining-rooms and café and bar and a unique flower room in place of the usual palm room. A number of private dining-rooms, reception rooms, parlors, assembly rooms, lounging rooms, ladies' writing room, banquet room, and state apartments will be on the second floor. The floors above will be devoted to the rooms for guests, of which there will be 600 with 300 bathrooms.

A good deal of attention, as is common in these gigantic new buildings, has been given to the decoration. The Rathskeller is an enormous room in grayish white marble and hand-made gray tile with curious and quaint decorations in gray-blue, the effect being cool and light. The halls will be decorated with columns and pilas-



HOTEL KNICKERBOCKER.

Broadway and 42d St., New York City. Warren & Davis and Bruce Price, Architects.

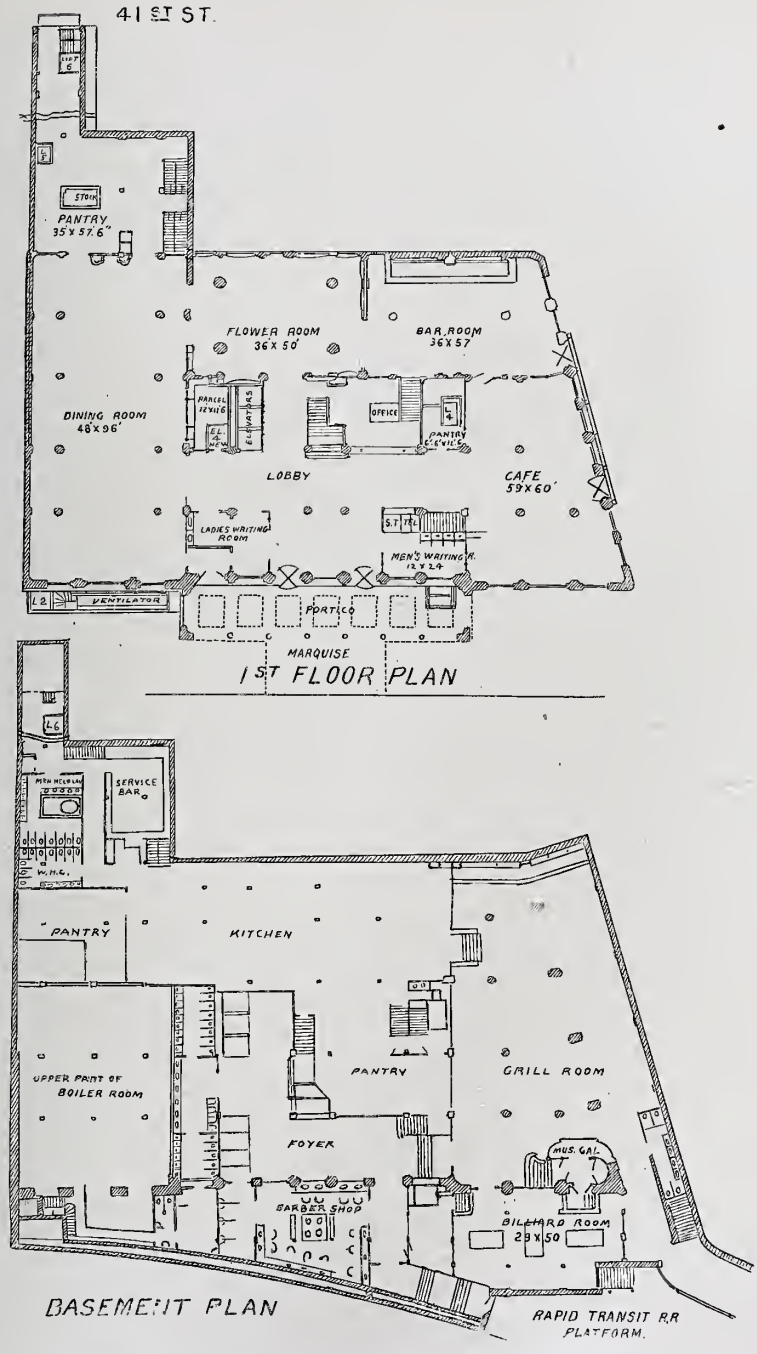
ters; all the ornamental work will be gold while the walls will be hung with a stuff specially woven for the purpose in a rich red, the base, wainscot, columns, etc., being of a gray-white marble. This general scheme will be carried throughout the public halls and corridors and added to it on the first floor will be an elaborate frieze and other ornament in low relief treated in Chinese carved red lacquer but in character corresponding with the architecture of the hotel. Thus in entering any room of the hotel from the foyer, halls or corridors the contrast of color will be from red, gray and gold in combination to whatever seems most suitable to the environment. For instance, upon arriving at the second floor one will see in the public rooms opening upon the corridor a contrast of royal purple and gold in the corridor, while in the minor rooms, such as the bridal suites, state apartments and the private dining-room, many pleasing changes in contrast and harmony will be found in every direction.

On the main floor the contrast will be more distinct and striking, as, for instance, in passing into the great dining-room the eye will meet a great mass of green and gold—green and gold that is translucent in the lacquered work over gold in the ornament—and solid green and gold in the woven silk wall covering, while above this the Italian painted frieze will have all the colors of foliage, architecture, and sky that the most skillful painters can portray; this full of atmosphere as well as the ceiling panels with their elaborate figure compositions, and these surrounded and held by rich and beautiful carvings of ornament and figures in relief, all in gold and color. The lounging-room for ladies will have its architectural feature in a classic East Indian manner, with carvings in Teak wood and décorations in Niello on silver.

A feature of the hotel is the large banquet room, 38 by 90 feet, connected with a serving-room. The banquet room is served by electric dumbwaiters from the kitchen below. As in the case of the hotel last described it is hard to get cornered in case of fire, for at the end of each corridor there is either a fire-escape or a staircase. A detail of interest is that there are plugs in the electric fixtures in each bedroom which serve as curling iron heaters or may be used to heat the water pads furnished for each room. The doors and floors are to be fireproofed to such an extent that one might pile the bedding and furniture up against the door and set fire to it without causing the doors or floor to burn.

Plans are about to be made for an extension on 31st Street of the Imperial Hotel which will make that house almost twice as large as it is now. The interesting problem that the architects have before them is how to make the two buildings fuse harmoniously together.

An interesting suggestion which occurs to one in looking over



BASEMENT AND FIRST FLOOR PLAN OF HOTEL KNICKERBOCKER.
New York City. Warren & Davis & Bruce Price, Architects.

AN APARTMENT HOTEL.

Cor. 5th Ave. and 60th St., New York City. Henry J. Hardenbergh, Architect.

the plans for these new hotels is the advance made in mural and ceiling decoration. We have now a great many very fine decorators and in recent years the builders of these large hotels have given the artists an opportunity to apply their art in a way that after all is the only vital way as far as decorative work is concerned; i. e., to connect painting with architecture. As history has shown it is the only way to produce really decorative painting. As in the case of the Waldorf-Astoria and Manhattan, no doubt provision will be made for the decorating of these new hotels in the same artistic spirit. The selection of the artists for the Waldorf-Astoria and the Manhattan and their resulting work point to the fact that simplicity and classic taste is taking the place of mere gorgeous underplanned decoration. I find in a public print of fifteen years ago an aesthetic description of the new hotels at that time which has to us a humorous as well as already an antiquated sound. The enraptured writer thus describes the modern hotel of his time: "Tesselated pavements, marble columns, groined, fluted and quartered ceilings; veneerings of precious stones, statuary and paintings, Pompeiian conceits in color and subject, tapestries superb enough for an oriental queen, and a glitter of gold and silver in crystal, are all baptized in a flood of delicate colors as a thousand jets of flame flow softly through colored glass and flash their splendors through overhanging pendants and candelabra."

There has been a great deal of talk to the effect that the hotel business is overdone, but in 1860 there were more hotels than there are now in proportion to the population. Since that time more than thirty hotels, first-class for their time, have been razed to the ground. The fact that so many gigantic new hotels are about to be built indicates the error underlying this popular idea.

William Hutchins.

AN ARCHITECTURAL EXPERIMENT.
Model of one bay of the 5th Avenue front of the New York Public Library.
Carrère and Hastings, Architects.

AN INNOVATION IN ARCHITECTURE.

JUST inside the fence that conceals from the public view what is doing on the ample site that has been cleared of the old reservoir for the erection of the New York Public Library, and somewhat south of Forty-first Street, the interrupted middle line of which marks the center of the plot, is now to be seen one of the most interesting of architectural experiments which should have very interesting and extensive results. It is nothing less than the erection, in full size, and in a plausible enough simulacrum of the white marble which is to be the actual material, of a whole bay of the building that is to be. Since the possibilities of slabs were made known, first by the World's Fair at Chicago, and afterwards by such temporary and festal but monumental-seeming erections as the Naval Arch in New York, it has been recognized that the material afforded an excellent vehicle for cheap experimentation. It has even been proposed, though we are not aware that the proposition has ever been completely executed, that all statues and public monuments should be erected *in situ* of the inexpensive material, before they were irretrievably committed to marble or bronze. But in architecture only feeble tentatives had been made, to the best of our knowledge, before the present instance. You may sometimes see a fragment of white entablature, or a detail of some bit of ornament, hoisted over a new wall. If you are an architect, you may surmise that this is done for the purpose of enabling the designer to judge of the effect of his work, particularly of its effect in scale, before he is fully committed to it by actual execution. It is a modern instance of a classical wise saw, "Fiat experimentum in corpore vili," or, in the vernacular, "Try it on something cheap."

The layman is apt to assume that it is part of the art and mystery of the architect's craft, that he knows, ex-officio, how details on a drawing-board are going to look, when they are executed from drawings in which they are not seen in their real relations or at their proper distance. An eminent engineer has been heard to say scornfully of the present experiment, that it was a "confession of incompetency." But, in fact, it is such a confession as a candid architect can very well afford to make. An architect of great eminence and long experience was once addressed by a lay acquaintance: "With your experience, I suppose you can tell beforehand just how your detail will look at a given distance from the eye and at a given elevation," and he rejoined: "On the contrary, I find myself deceiving myself on just that point all the time." The

modern practice of carving detail in place, instead of much more handily and cheaply at the stoneyard, is a very inadequate resource. It has been remarked that if the carver could stand on the sidewalk, from which his work is to be apprehended, and cut it on the cornice, say, the device would be effectual. Not so when his own nose is buried in it, nor is the matter greatly bettered if the designer stands on the sidewalk and throws up suggestions to him. But to put the detail actually in place and try the effect of it is a very different business. This is a kind of help which no architect in the world can afford to disdain or reject, when he can afford to make use of it. And a full size model of one feature, or of a dozen features, of so important and costly a work as the new Public Library of New York is to be, is worth many multiples of its comparatively trifling cost. And evidently the device is more useful according to the extent to which you can carry it. Here not merely a detail but a whole feature is reproduced, and a feature, moreover, which constitutes one of the main architectural units of the building, for such is a whole bay of the long curtain wall which is to connect the central pavilion that contains the entrance with the terminal pavilions. It is in this curtain that the effect of length, in a front very noteworthy indeed in New York in that dimension, is mainly to be conveyed, and that the actual dimension is as much as possible to be increased to the eye by architectural device, by that magnitude and repetition which, according to one æsthetician, constitute "the artificial infinite." Upon the effect of the unit very largely depends the effect of the series. When the designer has satisfied himself as to the effect of his bay, he has in effect satisfied himself about the effect of the whole curtain wall of which it is to form an integral part. To set up a fragment which is also a unit, so that not only the designer but the wayfaring man may study and appraise it, and search out what, if anything, is the matter with it, is a process for which, quite irrespectively of the merits of the architecture it embodies, the judicious can find nothing but praise. It is as different as possible from the order of Pietro de Medici to Michel Angelo to build him a statue in snow, which Ruskin holds up to the odium of succeeding generations. If the order had been for a model to be subsequently done in marble, and the monarch had been able to guarantee the sculptor against a thaw until he had studied, marked, and inwardly digested the effect of the snow image, the procedure, if accompanied with a *bona fide* order for the production of the work of art, would have, whether from an artistic or a "professional" point of view, been entirely unobjectionable and even praiseworthy. And it is such an opportunity that the clients of the architects of the New York Public Library have afforded to those designers. It is so commendable an example that it seems likely to

impose itself upon all owners and representatives of owners in charge of public and monumental architecture. Nay, so important is it, and so inexpensive in comparison with the results, it ought to attain, that it would be no hardship for the prospective receiver of a commission upon millions to stand the cost of it himself; although we have, of course, no information or conjecture how that detail was arranged in this present case.

We are by no means writing a critique on the design for the Public Library. That would not be fair at this stage of the work, nor is the available material at all sufficient for that purpose. The unwise ancient who showed a brick as a specimen of the architecture of his house was and endeavored to sell the house from the specimen brick was not more unwise than would be the inspector who should judge an ambitious design from one of its features. It is plain from this feature that there has been a good deal of studying going on since the submission of the competitive plans, in which, if we remember aright, the order was not employed at all in the curtain wall, but this was left as a foil to the richness of the central and terminal pavilions. Neither is it necessary to criticise the building in order to emphasize the manifest advantages of the device the architects have employed to enable, primarily themselves, and only incidentally and unavoidably the passing public, to judge of the effectiveness of their dispositions with respect to a single feature. For it is, of course, evident to them, now that the feature is in place, as it must be to every instructed and critical spectator, that there is a general error, in point of scale, on the side of deficiency, nowhere on the side of excess. Much of the delicate detail is inapprehensible from the other side of Fifth Avenue, and can scarcely be said to count even as a vague general enrichment, still less to make any effect by itself when it is looked at for its own sake. The designers may derive this comfort from contemplation of the model, that the work is, "in scale," with itself, which is to say that it all equally errs, and in the same direction. This failure is a kind of success. What is more to the purpose, it is entirely remediable. One cannot exactly say, to be sure, that he would wish the flat arch of the upper opening to be any more conspicuous and flagrant than it is. In truth, even a little subjugation would do it no harm. But evidently the ornament under it, the sort of triglyphs, without reference to its intrinsic merit of appropriateness, quite falls short of its intended effect. Evidently the delicate classical detail of the cornice might be enlarged and invigorated to its advantage, and without losing its delicacy. Evidently the crowning balustrade is trivial, and would gain by an increase in the size and a diminution in the number of the balusters. And apparently the same remark may safely be made upon the

fluting of the columns. At any rate, the magnification of the feature to its full size, and the setting of it up "in the round" puts the architect in possession of information which his own imagination could not possibly supply so satisfactorily from the study of his drawings, whatever their scale. Q. E. D.

One other remark "falls to be made" upon the exhibition of this fragment in place, and that is, how very fortunate the architects were in a site which enables them to transcend the trammels of the New York street system. Their central pavilion will interrupt and close, as the central feature of the Reservoir before it interrupted and closed, the vista of Forty-first Street. It will be the fault of the architects themselves if the feature thus framed is not greatly impressive by reason of this advantage. We were pointing out, the other month, what a great factitious advantage a similar position gave the architect of the Metropolitan Museum of Art, and how admirably he had made use of his advantage. If the center of the Public Library shall prove worthy of its framing, the question will arise with renewed urgency, why do we not provide more such architectural opportunities? At present, they can only be had when part of a public park is given over to a public building, as is the case here with Reservoir Square and in the other instance with Central Park. Why should not such opportunities be provided by the closing of cross streets when an architectural project worthy of such an operation is under consideration? The answer is, because the Street Commissioners who "regularly laid out" New York a hundred years ago were very limited persons, who took very short-sighted and mean views of the problems they had to solve, and, in fact, shirked or bungled. As Mr. Olmsted pointed out, when he tried to prevent the extension of their blunders to the Bronx, it did not enter their heads to provide, anywhere within the limits of Manhattan Island, a worthy site for a noteworthy public building, while they were careful to limit the lesser dimension of such a building to two hundred feet. One or two object lessons, such as are afforded by the Metropolitan Museum and the Public Library, of what might be done by disregarding the street system ought to prove of high practical value in the education of the public towards demanding a multiplication of such opportunities. When we arrive at the point of a systematic effort to repair the blunders of our street plan, in New York, so far as they may still be reparable, this matter of providing suitable sites for public buildings is one of the first that ought to attract the attention of the revisers

FRENCH SCULPTURE OF TO-DAY.

The Art of Denys Puech.

IF asked to name a sculptor whose work is specially adapted for the beautifying of our libraries and studies, I should unhesitatingly reply—M. Denys Puech. There is a classic grace, a purity, a harmony about everything that his hand produces, which makes his statues and smaller pieces of sculpture admirably fitted for these places of contemplation. No contemporary French artist is endowed with a surer, more delicate taste, a more supple imagination, or a greater skill in creating works of a strong literary interest. Doubtless for this reason it is that M. Denys Puech has been chosen to execute some of the most important public monuments, which have been raised of recent years to the memory of literary men.

In referring, however, to this literary side of his art, I was not thinking so much of his monuments to the eminent critic Sainte-Beuve, and to the great poet Leconte de Lisle, both in the Luxembourg Gardens, as of a quite recent work, which he exhibited at this year's Salon of the Société des Artistes Français. "La Pensée," which is a life-sized statue in several-colored marbles, was executed for Mme. Herbert, who intends to place it in the library of her Paris house. One can form but a very poor idea from a photograph of the great beauty of this charming work. The greater part of the dress, the folds of which are most skilfully arranged, is in claret-colored marble; but a portion which covers the bosom is in green marble, producing a most pleasing effect. The flesh is, of course, of white marble, delicately tinted to give it the warm hue of life. The eyes are blue; the wreath around the head is gilded; the hair is tinted, here and there, a beautiful golden brown; and to give the figure a still more life-like appearance there is a golden ring around the little finger of the charmingly posed hand. The sweet, yet pensive, smile on the face and the gentle inclination of the head of this Goddess of Thought have been admirably rendered by M. Puech.

The use to which this exquisite statue is to be put reminds me of another work by this sculptor which, as it can be obtained in a reduced size in terra-cotta, ought to find a home in the library of every lover of the beautiful. I refer to his "Muse of André Chenier," the original of which is in the Luxembourg Gallery. It was executed at Rome in 1887, and, on being exhibited at the Salon of the following year, attracted great attention on account of the touching, gracious feeling which it expresses. A nymph, whose

LA PENSEE.

M. Denys Puech.

THE MUSE OF ANDRÉ CHENIER.

M. Denys Puech.

form has all that classic grace which is to be found in the poet's "Idylles," is kneeling, holding in her arms in the most tender posture the head of the unfortunate poet who, two days before the overthrow of Robespierre, was guillotined at the early age of thirty. She is kissing his forehead, and, with her long, loose-flowing hair, has formed a sort of winding sheet which hides from view the exact place where Samson's cruel knife severed the head of her dear poet. What tenderness there is in the almost maternal manner in which her left hand supports the head, in the closed eyes, and in the skilful arrangement of the hair! "The Muse of André Chenier" is a perfect poem in marble. In addition to its imaginative qualities, M. Denys Puech has given us in this work a truthful likeness of our poet, who, but for his untimely death on the scaffold, would most likely have become the greatest singer in France. It will be found to accord almost feature for feature with the portrait painted by J. B. Suvée at the St. Lazare Prison on the 29 Messidor l'An 2.

There are two other pieces of sculpture by M. Puech at the Luxembourg Gallery which call for our attention. One, however, has a greater interest for us at this time than the other—namely, the group entitled "La Sirène"—since Mr. Fletcher, the well-known connoisseur of New York, has commissioned the artist to make a replica for his magnificent gallery of works of art. I believe it is an open secret that this lover of the fine arts intends to bequeath his fine collection of pictures and sculpture to the Metropolitan Art Gallery. Let us see what the sculptor has attempted to realize in "La Sirène." Honest George Chapman, in his rendering of Homer's Odysseys, says:

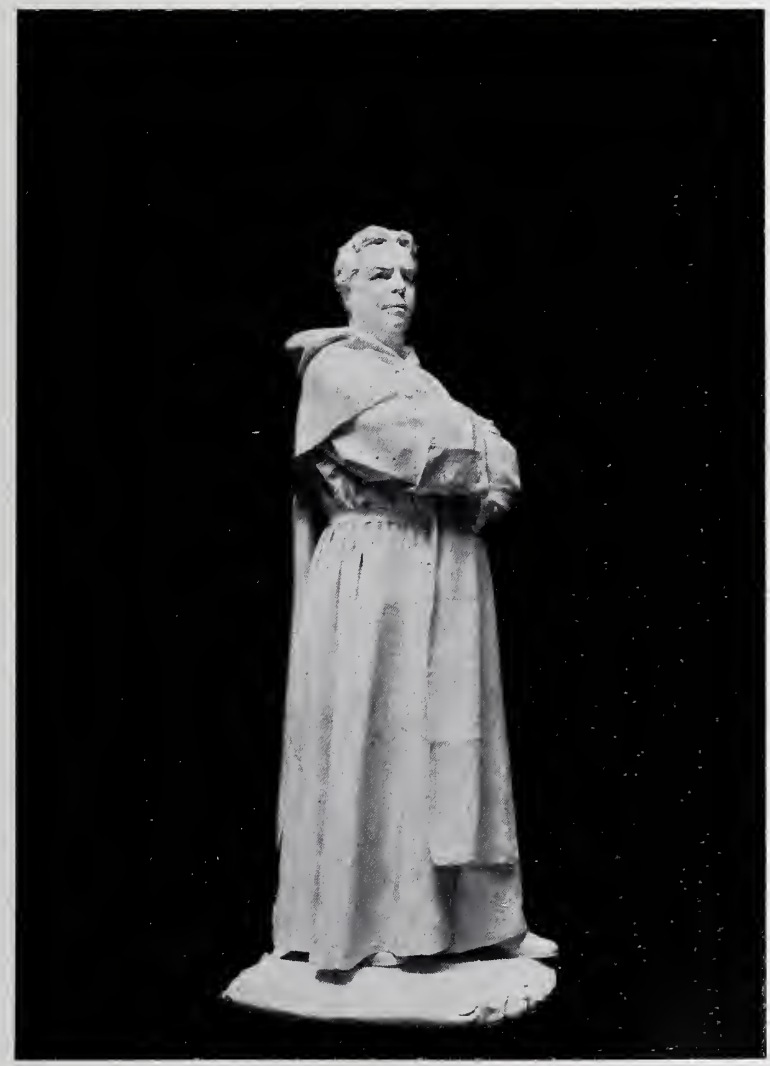
> "First to the Sirens ye shall come, that taint
> The minds of all men whom they can acquaint
> With their attractions. Whomsoever shall,
> For want of knowledge moved, but hear the call
> Of any Siren, he will so despise
> Both wife and children, for their sorceries,
> That ever home turns his affection's stream,
> Nor they take joy in him, nor he in them.
> The Sirens will so soften with their song
> (Shrill, and in sensual appetite so strong)
> His loose affections that he gives them head."

It is one of these subtle charmers of the sea whom M. Puech has represented. A beautiful young man has failed to stop his ears with "sweet soft wax" and is being borne to the Siren's home, where "dead men's bones, their withered skins and all" are scattered on all sides. There is a look of sadness, one might even say terror, in his eyes, an expression of pain in the upturned lip, as though he dimly foresees the fate which is in store for him. And yet he can-

LA SIRENE.

M. Denys Puech.

LA SEINE. M. Denys Puech.



PERE DIDON.

M. Denys Puech.

not make an effort against the wiles of the winged charmer; her smiles have robbed him of all his manly courage and resistance. There is a world of expression in the manner in which, as he is carried forward on her shoulder, he allows his hand to rest in her's; for the looseness of the Siren's grasp tells that her victim is robbed of all power of will. M. Puech has happily combined two traditions, according to which Sirens were either harpies or mermaids, by giving his "Sirène" the wings of a bird and the tail of a fish. These wings add not a little to the poetry of the group, and give it that movement which is one of its special features.

There is a third work by this sculptor in the Luxembourg—a bas-relief in marble entitled "La Seine." It can be obtained in a reduced size in bronze. Admirably suited for the decoration of a drawing-room, these bronze reductions can be seen in the houses of many wealthy Parisians. The chaste form of the nude goddess, who is represented on this pretty piece of sculpture, admirably symbolizes our beautiful river and the unique island upon which the Cathedral of Notre-Dame is built. The towers of the church and graceful spire of the Sainte-Chapelle, which the sculptor has shown in the low relief, give an additional charm to this choice work of art.

At a recent exhibition of statuettes in London, M. Denys Puech's smaller pieces of sculpture, several of which were acquired by well-known connoisseurs, were universally admired. He had on view a small terra-cotta bust of a Roman boy—one of three copies of which one is in the collection of the Baron Alphonse de Rothschild; and, besides other works, a statuette of a woman holding a jug from which pours water, entitled "La Source," a pleasing variant in white and marble of Ingrès' famous picture with the same title.

Another class of work by this leading French sculptor remains to be mentioned. I refer to his figures of great men which are erected in various parts of France. The accompanying photograph of his imposing statue of Père Didon, the famous preacher, which has just been unveiled at Arceuil, will give a very good idea of the high qualities of M. Puech's public monuments.

Frederic Lees.

Opinions Official and Unofficial.

Buying Back a River Front.

Springfield, Mass., has done a notable thing. The words are used advisedly; for the thing is notable, even as coming from Springfield whence notable things are expected, because it is a civic improvement effort in which the whole community has united. For this reason it differs from the efforts of nearly all other places, for, as a rule, they are undertaken by a minority that becomes, in the cities, so hopelessly small that the effort makes hardly a ripple on the life of the community, and a large proportion of the population does not even know that there is a movement afoot which concerns and ought to interest all. They learn of it first, if at all, by the accomplishment of some tangible result, and feel—the work having been accomplished—only a languid, stolid, and short-lived interest. There is too much doing in a town for people to dwell long upon what has been done.

But in Springfield there has been a really popular civic improvement undertaking. All classes of citizens have pulled together to accomplish a certain end; and, as was quite to be expected, they have accomplished it. This is the only kind of civic improvement effort that can result in the development of a real municipal art, for that is not something which a clique, or a handful of public spirited persons out of a whole city of careless people, can create. Civic art is too big a thing for that. It must have its source in a wave of popular enthusiasm and united effort such as Springfield has recently illustrated.

Springfield, Mass., like so many other towns, turned its back on the river when the railroad was built. It appeared that the river had lost its usefulness. It would never now be the highway of travel. The "water-gate" of Springfield would not be the city's main entrance, but only a side door—and an almost disused one at that. It happened that the river was majestic and beautiful, the most beautiful feature that Springfield had, but that was not considered in the rush for the new entrance. The enterprising railroad, hideous as it was, was permitted to spread its black and dirty length along the lovely river margin, that the swift trains might the better mock the slow craft on the river, and the town relinquished completely its opportunities and possibilities for river en-

joyment. The only peculiar fact about this story is its pathetic familiarity. Towns in all directions have done the same.

In the heart of Springfield, about two blocks back from the river but on the edge of Main Street, there is an open space called Court Square, occupying the area of a city block. It was purchased eighty years ago by the subscriptions of public-spirited citizens and deeded to the county as a public square "in order," as the old record reads, "that there may be an open square or yard for the use of the inhabitants thereof (i. e. of Hampden county), near the Court House." It was purchased at "great expense," the deed recites, and is "to lie open forever and to be called Court Square, the same land never to be alienated or to be incumbered with any buildings, or appropriated to any other use than a public common." The net cost of this precious tract was, four score years ago, more than $3,000 (!), and to the sum 47 citizens subscribed in varying amounts.

The people loved the square, after the early fashion. A year after its purchase the court appointed a commission to secure, at a cost of $60, a fence for it. In 1834 the county sold the grass on the square, so there could not have been much further improvement; but a fountain was given the next year, to be soon after broken by boys, and in 1851 the commissioners adopted an order providing that there should henceforth be no ball playing or carpet shaking on the square, and that persons who entered the enclosure must not "trample the grass or molest the trees." Such, then, were the modest beginnings of civic art at Springfield.

In 1858 there was another public subscription in behalf of the square, the special object of this being to buy a fine iron fence. Trees had been set out also, by public-spirited citizens, nearly all the elms that are to-day the square's chief beauty having been thus obtained, and in 1888 the county transferred the tract to the city, to be improved and perpetually maintained for the benefit of the public.

Springfield, or a portion of Springfield, awoke some years ago to a realization that the noble Connecticut river was the best natural feature that Springfield possessed and that the city had turned its back on it and, by persisting in so doing, was making much of its self-improvement effort far less effective than it ought to be. Even the bridge across the river was one of those ugly old hooded structures that New England Puritans used to erect over their streams lest they see the water dancing, and when a stranger in Springfield asked to be shown the river—before he spoke of the park, or the arsenal, or even the high school—he had to be led into a tunnel, or down an alley, or on to the railroad tracks. This was mortifying, and a plan was talked of—quite naturally—for ex-

tending Court Square a block or two further, to the river bank. But the expense seemed prohibitive.

About a year ago there died a wealthy former resident of Springfield, who had earnestly advocated this plan, and it was found that by will he had left $10,000 which might be applied to the object. His name was Tilly Haynes. This greatly increased the interest in the matter, and an estimate was made that with $200,000, a vast public improvement could be obtained. It was suggested that if, by a public subscription, half this sum could be raised and presented to the city ,the municipality could well afford to bear the expense of the land's improvement. A new bridge was soon to be erected in any case, to be paid for by bonds, and here was a way to secure a beautiful and convenient approach to it, while the vista of the bridge

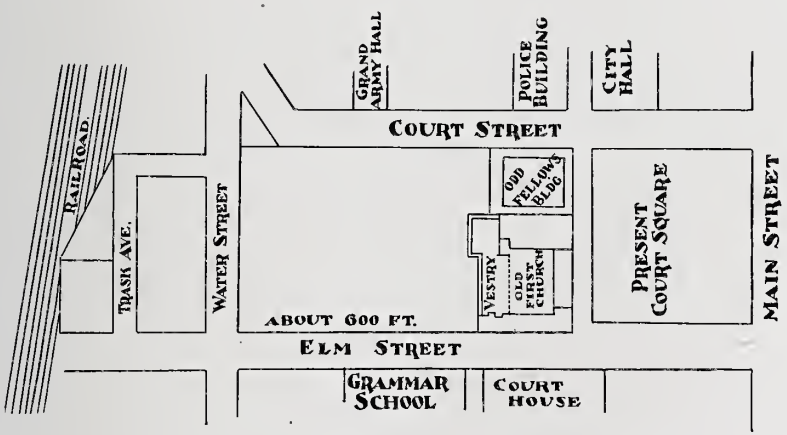


DIAGRAM OF COURT SQUARE, SPRINGFIELD, MASS.
The property to be acquired runs from the Old First Church to the River.

would enhance the attractiveness of the square. The Court House, a Richardson structure, would face on the plaza thus made, as would also the City Hall; and the old First Church and Odd Fellows' Hall, now occupying a portion of the proposed site, could, it was suggested, be allowed to remain in their present position unmolested as long as they were still in use, so reducing the necessary initial outlay and by no means defeating the scheme. Everett H. Barney then came forward with an offer of another $10,000 to duplicate the Haynes bequest, and with this nucleus enthusiasm rose high.

Led by "The Republican," which had just been publishing a series of articles on the aesthetic possibilities of Springfield, the press conducted an earnest public campaign. The movement was not a little aided, too, by the circumstance that the semi-centennial anni-

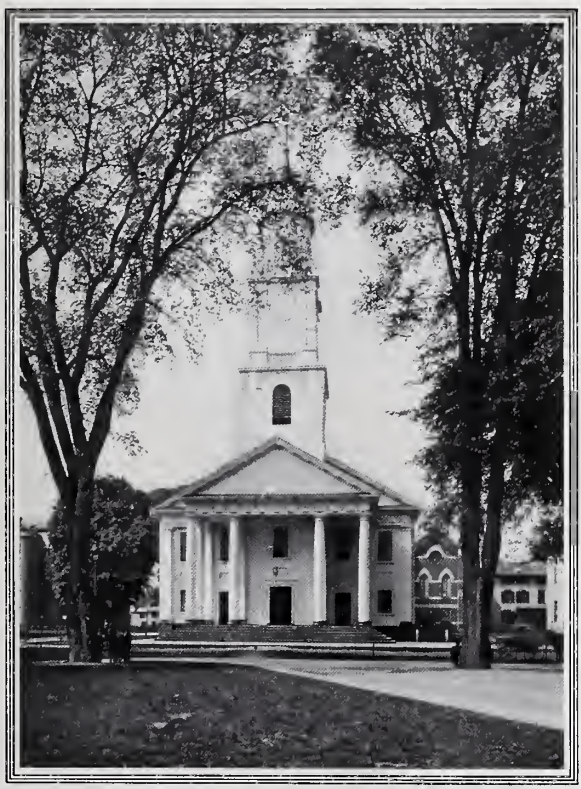
versary of the city would occur in May of this year, for this event suggested a definite date for the completion of the fund, and stirred up public spirit, besides giving special pertinence and additional justification to the appeals that were made to civic love and pride.

There is little need to follow the course of the campaign. It had more of inertia and indifference to overcome than of opposition; but it was managed earnestly and well. For the most part the arguments were practical. Haste was urged, for instance, on the plea

COURT HOUSE, SPRINGFIELD, MASS.
Gambrill and Richardson, Architects.

that the ground would never grow cheaper, and that within a few years other public works were going to make a heavy demand upon the taxpayers. But all through the movement the aesthetic phase of the project was kept clearly before the people. It was pointed out that with the City Hall, the Police building, and the Grand Army Memorial Hall already located on one side of the proposed tract, and with the Court House and a grammar school on the other side, it should be easy to put into operation the group plan of pub-

lic buildings. To this group the First Church, with its Wren steeple, and the Odd Fellows' Hall would make a notable addition. It was shown that the extension of the square would constitute a centrally located park of very fair size, one that could be reached in a few moments' walk from any of the busier portions of the city and yet one sufficiently removed from the dust and noise of Main street to make its shaded paths and seats restful and cool. Here the band concerts would not be interrupted by the clang of trolley



OLD FIRST CHURCH, SPRINGFIELD, MASS.

cars, and there would be more room for the people to gather and hear the music, while, about all, there would be the charm of the large and beautiful river. It would be as though this were restored to Springfield after a long interval; and once again the people would have a place to secure boats, easy of access and altogether pleasant. Not only would the beauty of the river be restored; but much of its active enjoyment.

With the coming of the semi-centennial days, at the end of May, the announcement was made that the popular subscriptions had

more than reached the $100,000 goal proposed. At the end of the celebration they had passed this limit by about $1,400. This news, with its rich significance—in promise of civic beauty for the future and evidence of civic spirit in the present—was the highest note of the anniversary. As "The Republican" exultantly said: "The banners and lights, the speaking and parade must prove ephemeral; but the benefaction will be as immortal as the municipality, forever signifying what the Springfield of 1902 stood for." Most of the festivities were, appropriately, held in this very Court Square, which the Architectural Club had transformed into a temporary Court-of-Honor, as if in promise of what was to be.

There is much in the mere list of the contributors that is suggestive and significant. The semi-public corporations gave largely, in unconscious evidence that civic art has a practical and financial value independent of sentiment. Men and women gave generously; but out of a list of many hundred there were only fifty contributors of more than $100 each, while far more than that number of subscribers gave less than $1.00 each. This shows how truly popular the movement was. For the most part all the donors were individuals; but several firms, some associated employees, and a few societies gave, so extending the interest still more widely. For instance, the Societa Unione Fratellanza Italiana gave $50, the Springfield Printing and Binding Company a like sum, and the employees of the Bemis and Call Hardware Company $14. A little was given in memorials, and a good deal, as always, was given anonymously; and all languages are represented in the list of names.

As yet there is only a great, popular civic movement to be recorded, for all the plans for the tract's development have still to be made. Perhaps the railroad tracks will be shifted to the other side of the river, perhaps a viaduct will be built over them, and it may yet be possible to construct a drive or promenade along the river front. All these things have been talked about. The public subscription merely buys the land. This is deeded to the city, and the city must throw it open to the public, must make the improvements and beautify the spot. It may proceed rapidly, or it may advance the project by slow degrees: but it cannot fail to act, and to act conscientiously and with artistic circumspection, where the people have so deep a personal interest. For this is the notable thing, that a community discovered its mistake in permitting a water front to be hideous that might be beautiful, and then retrieved its mistake by buying back that water front with its own money, and giving it to the city with the injunction that it be restored to the people and kept open and beautiful for all time.

What should be the relation of the American universities to the teaching of Fine Art? Should the Department of Fine Arts include schools of painting and sculpture, or should it be limited to those branches of art education, which are more a matter of knowledge and less a matter of training? These questions have been very ably answered by Mr. Russell Sturgis in a "Letter to the President of Columbia University concerning a proposed Department of Fine Arts." He reaches the conclusion that "whereas nothing could be more important than to establish in Columbia University a department of fine art, the work of this department of fine art should be limited to history, theory, critical examination of ancient and modern works of art, and of the schools and large groups, into which we divide them for the sake of convenience; and in connection with this study, such arts as are not manual arts may be taught more or less well." And Mr. Sturgis' reason for this limitation of the function of the university in art education is contained in the statement that "university education has to do with thoughts that can be taught in words and all that is expressible in the language of words. A manual art has nothing to do with the thoughts which are expressible in words; by it thoughts are expressible wholly otherwise." This principle is unimpeachable and should be constantly kept in mind by those interested in art education. At best American art has a strong academic tendency, which should be checked by keeping it as free as possible from merely academic influences. We do not want any "professors of painting and sculpture.' It is the living tradition into which the young painter or sculptor must enter, and the only way he can make it his own is by beginning early and working hard under the best technical influences. Even collegiate training is a doubtful advantage, and would be no advantage at all, were it not that the American secondary schools do not furnish an adequate rudimentary education.

Universities and the Fine Arts.

Architects will at once notice, however, that Mr. Sturgis separates in this respect the teaching of architecture from that of painting and sculpture. "It is not out of the way," he says, "for a university to include a school of architecture, because architecture, as practised in modern times is not a manual art, but is a combination of an intellectual but non-artistic study with science, and with artistic traditions now embodied in books. What little skill in any manual way the architect may require, he must of necessity gain outside of the university, just as he must gain, also, outside of the university, that knowledge and instructive sense of business expediencies, which will make him more or less successful in getting business, and in doing it to the advantage of his employer. A man may

be a most successful, prosperous and honored architect, and never put his hand to a piece of coloring or a piece of modelling during forty years of active practice in his profession. It is, therefore, evident that an architect may be taught in a university; although, of course, it will be the business of his teachers to point out to him that there is one thing or even two things which the university cannot give." We have quoted this passage in full, because as a whole it gives the impression that Mr. Sturgis in approving university schools of architecture rather submits to a practice already established than cordially acquiesces therein. "That is the way modern architecture is taught," he seems to say, "so go ahead, but what a way it is!" He evidently believes that the "one thing, or even two things, which the university cannot give" is or are fundamental; and here again we are not inclined to dispute his verdict. Architecture, like painting or sculpture, requires a special kind of constructive vision—a fresh and original way of seeing and subsequently of planning certain structural and decorative forms. Such a constructive imagination is, of course, a gift, which cannot be taught in the case of any of the arts; but the one thing art education should not do is to interfere with the free and sufficient development of this constructive imaginative pertinency; and surely the combination of "intellectual," scientific, and bookish training, which Mr. Sturgis describes, is peculiarly designed to keep architectural practice merely regular and academic, and to stifle genuine imaginative power in architecture as contrasted with what is at best merely tasteful adaptations of traditional forms. In this connection, it is as well to remember that in France architecture is taught, not at the Sorbonne, but with painting and sculpture at the "Ecole des Beaux-Arts," and it is a pity that in this country its teaching should be associated with the scientific and technical schools rather than with the schools in which the fine arts are taught. It is true that none of our fine art schools have secured the organization, equipment or resources, which would permit them to establish departments of architecture; and it is true, also, that the existing departments of architecture in the large universities do their best, under somewhat discouraging circumstances, to give the incipient architect some power of original vision. The universities will remain, as they have begun, the *locus* of American architectural instruction, and the best chance of improvement will lie in getting eminent architects to take as much interest in training their successors, during and immediately after the period of schooling, as eminent physicians do in training the doctors of the following generation. During the past thirty years American architects have been laboring to create a tradition, which will now require some sacrifices for its perpetuation.

The site, which has finally been selected for the equestrian statue of General Sherman by Augustus St. Gaudens, although acceptable, is by no means the best in New York for that particular purpose.

A Monument and Its Site.

Mr. St. Gaudens preferred another location, viz., the triangle formed by the southern extremity of the Mall, which would have provided both a more effective background and approach, and more appropriate surroundings; but there were obstacles that proved to be inseparable. Certain very fine trees would have had to be taken out; and that seemed an abomination and a desecration to tree experts. In a city whose aesthetic decisions were determined by any proper scale of aesthetic values, a few trees, no matter how fine, would scarcely have stood in the way of using for so distinguished a piece of sculpture the one perfect location, but in New York there is no accepted scale of aesthetic values, which denies horticulturists rather than sculptors the privilege of deciding negatively, at least, the situation of a statue. And as most American horticulturists are tree-worshippers, and make of trees and plants rather objects in themselves, than objects, which should be adapted to human uses, some other site had to be found for the Sherman. After several more or less unhappy attempts had been made to select a situation on the West Side, the Plaza site was suggested, and, after some misgivings, accepted.

The location at Fifty-ninth Street and Fifth Avenue will unite some advantages with some disadvantages. Mr. St. Gaudens' Sherman is what it was intended to be, a nobly conceived national monument, patriotic in the sense that it embodies with fine certainty and with pregnant propriety both the picturesque personality of Sherman himself, and the indomitable spirit that marched the northern armies to victory. It should have had a location, in which nothing interfered with its effective power, and its moral and formal beauty, in which everything contributed to make it triumphant and impressive. The Plaza site fulfils only a part of these requirements. The immediate surroundings of the monument will be well enough; and the situation has the advantage of being central and easily accessible; but the square itself is barely the place to enhance the effectiveness of such a statue as the Sherman. Mr. St. Gaudens' work is not a monumental and masterful creation, which will speak with a full voice in an environment of such architectural magnitude and social bustle. The Plaza is one of the gayest and busiest squares in gay and busy Manhattan; and every year it will become gayer and busier. Already there have been erected upon it two "sky-scrapers;" and in the near future we are promised a couple more—one of them to be over twenty stories in height.

Of course, there will be no competition between the still small voice of the Sherman and the Leviathan bellowing of these architectural monsters. Still the incongruity is manifest—as is the danger that the Sherman may be either passed by in such a busy place, or else obscured by the shadow of the many-storied buildings.

The incongruity is manifest. Yes; but it is inevitable. New York City owns a tradition, almost a fatality of formlessness. It calls itself the American metropolis; but it is quite without well-ordered metropolitan concentration and distinction. Its power of expansion has always exceeded its power of assimilation, so that, while it possesses much, everything is misplaced. It could boast one time of the most beautiful City Hall in the country, surrounded by a pleasant and spacious little park, and approached by the southerly line of Broadway; but even this one example of comeliness and propriety, it must needs destroy. The City Hall Park was filled with buildings which left the City Hall dwarfed and shut in, while the really beautiful approach was filled in by the erection of the Post Office at the apex of the triangle. It possesses many beautiful buildings; but the lay-out of the streets is such that they, none of them, can obtain a location which is exceptionally appropriate, and so the beautiful buildings are lost in a wilderness of uniformity or eccentricity. Its squares are for the most part entirely without either convenient or comely proportions; its small parks, except those most recently acquired, are designed in a manner befitting a small village, instead of in the manner befitting a great city; its streets are quite without pleasant surprises in the way of sculptural furniture; its foreign population, drawn from all the countries of the earth, shed their picturesqueness when they leave the steamer; and even the native born, including as they do many of the most enterprising men of business, and the most distinguished American artists and men of letters, merely live side by side rather than together. And so in a city of misfits, we need not be surprised that one more misfit be added thereto. Let us be thankful rather than the misfit was no worse, and that the statue of Sherman was not placed in Sherman Square, because of what may truthfully be called merely a nominal reason.

CORRECTION.

In the October number of the Architectural Record, the design of the residence of Mrs. Elliott F. Shepard at Scarborough, N. Y., was erroneously ascribed to McKim, Mead & White. As a matter of fact the large stable illustrated on page 559 was the only building designed by that firm. The house and the grounds were the exclusive work of the firm of Messrs. Haydel & Shepard, who at that time were practicing together, but have since separated.

THE ARCHITECT'S PORTFOLIO

OF

RECENT AMERICAN ARCHITECTURE.

A CHRONICLE IN BLACK & WHITE

DRIVEWAY AND APPROACH TO RESIDENCE, OYSTER BAY, L. I. Charles P. H. Gilbert, Architect.

ENTRANCE PORCH TO RESIDENCE, OYSTER BAY, L. I. Charles P. H. Gilbert, Architect.

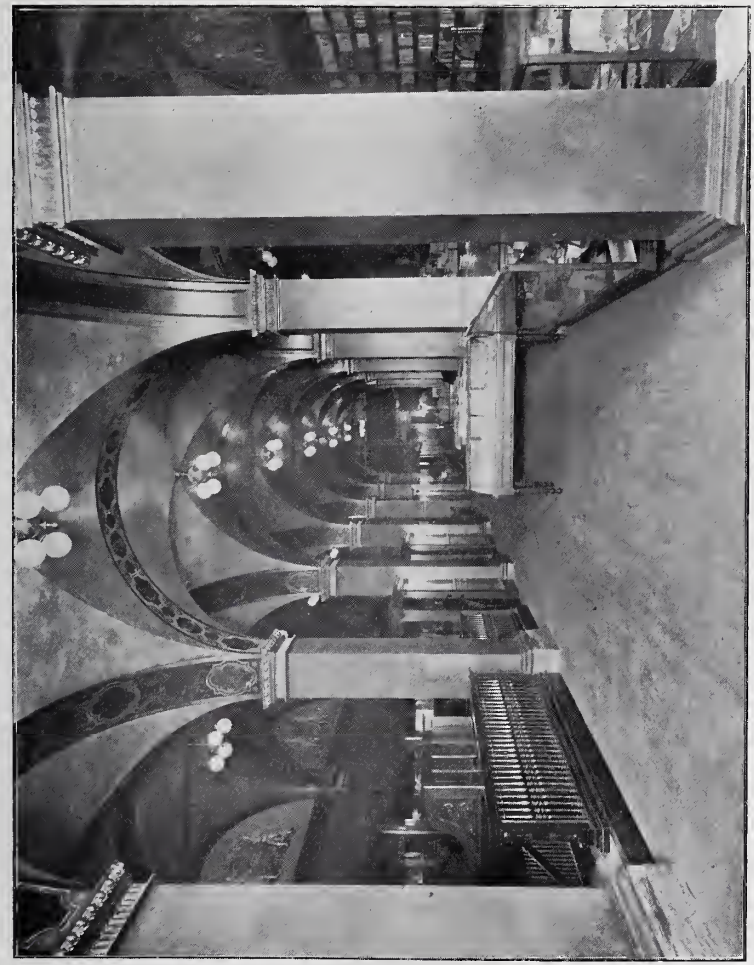
RESIDENCE, OYSTER BAY, L. I.

Charles P. H. Gilbert, Architect.

RESIDENCE, OYSTER BAY, L. I.

Charles P. H. Gilbert, Architect.

INTERIOR OF AMERICAN BAPTIST PUBLICATION SOCIETY'S BUILDING.
Philadelphia, Pa. Frank Miles Day & Bro., Architects



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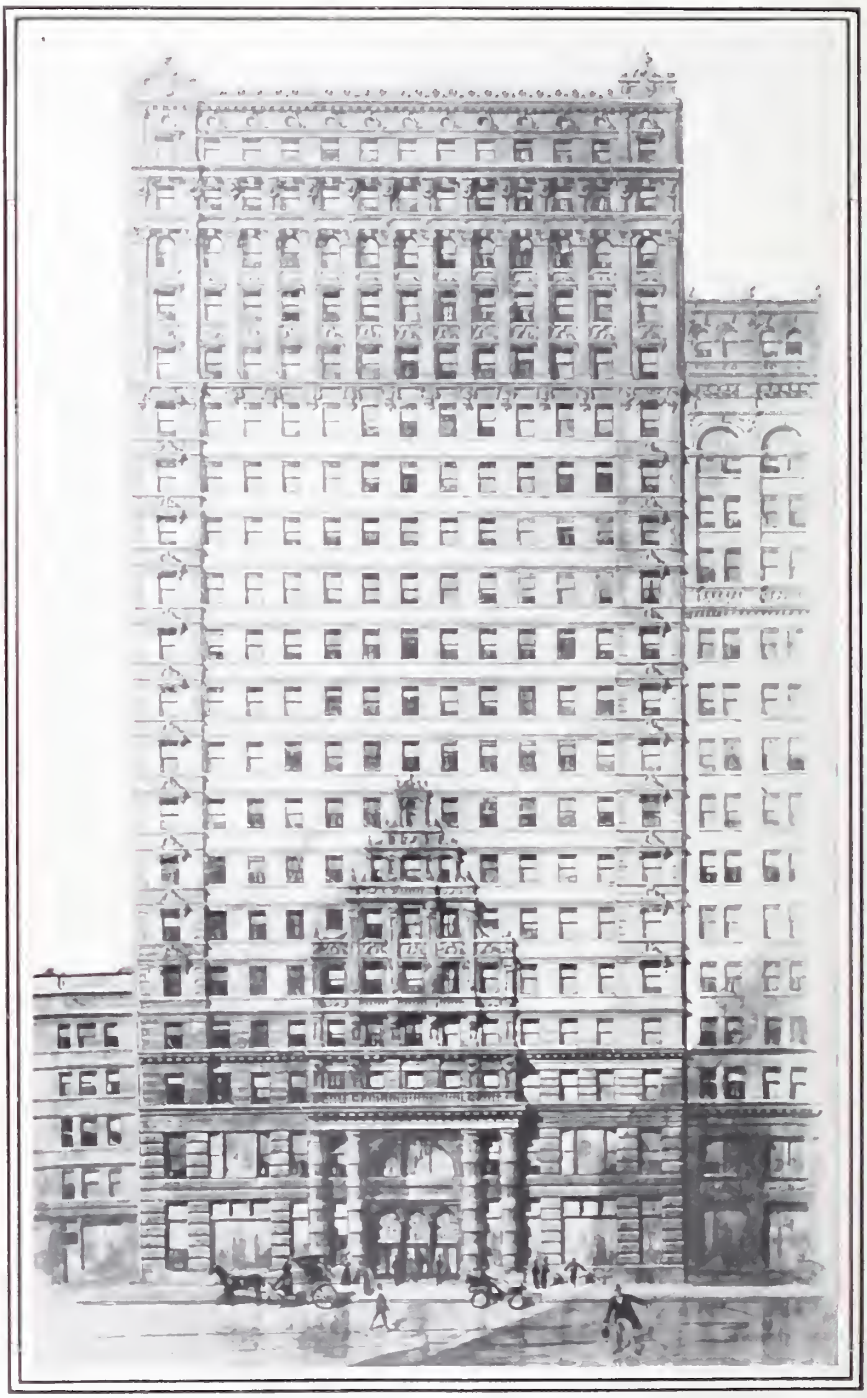
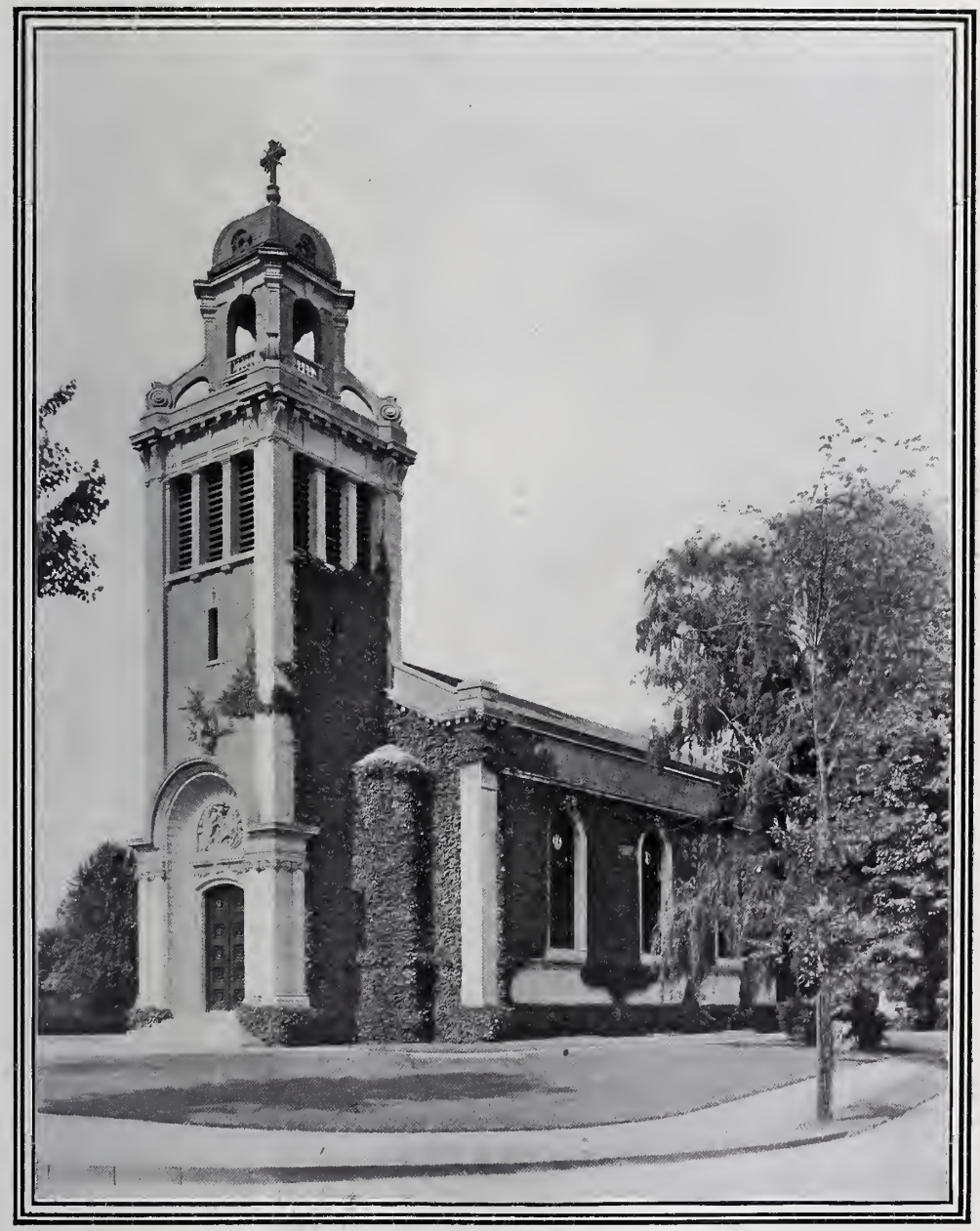


OFFICE BUILDING AT 42 BROADWAY.

New York City. Henry Ives Cobb, Architect.



MEMORIAL CHURCH, BUILT BY MRS. ELLIOTT F. SHEPARD.

Scarborough, N. Y. Abner J. Haydel, Architect.

Glen Cove, L. I. RESIDENCE OF A. C. HUMPHRY. C. P. H. Gilbert, Architect.

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The Architectural Record

December, 1902

25¢

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Architects and Landscape Architects.

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The
Architectural Record.

VOL XII DECEMBER, 1902. No. 7.

THE PARISIAN SUBURB OF PASSY.

Its Architecture in the Days of Franklin.

THE obliterating hand of Time passes so ruthlessly over the surface of the land that it is often a matter of great difficulty to form a correct idea of the aspect of our cities and suburbs in ancient times. Passy, the favorite place of residence of thousands of Americans and English who come to Paris every year, is no exception to the rule. So many changes have taken place in this beautiful suburb that, to picture it as it really was in the comparatively recent days of Benjamin Franklin, let alone its appearance at a remoter period, needs no little effort of the imagination, coupled with an antiquarian knowledge which few have the time or the patience to acquire. How difficult it is, for instance, for those familiar with modern Passy, the bustling activity of its main street, its agreeable avenues bordered with fine villas and lined with shady chestnuts, to figure to themselves that it was once a rugged tract of open country. The present is so real that it seems hardly possible it could ever have been different. Yet rare old engravings and title deeds of estates in the city archives tell an unmistakable tale. Passy in 1658, in which year the manorial rights came into the possession of a M. and Mme. Claude Chahu, who were the real founders of the suburb, was but a mere village of vine-growers and farmers—a cluster of cottages around a small manor-house and a twenty-acre estate. However, owing to its exceptionally favorable situation, the place was destined to grow rapidly; and the hundred years or so between the date of its elevation to the dignity of a parish and that of Benjamin Franklin's visit to obtain the support of France in America's war with England saw many wonderful changes. The little estate of the Chahu family became exceedingly extensive, and their modest manor-house gave place to a stately château, known as La

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FIG. 1.—THE HOTEL DE VALENTINOIS.

The remains of the hotel are situated in the courtyard of the Friars of Christian Doctrine.

Pouplinière, so called after its occupier, Jean Joseph Le Riche de La Pouplinière, who, in his rôle of patron of the arts, entertained there some of the most distinguished men of the day, including Jean Jacques Rousseau, Carle Vanloo, Pigalle the sculptor, Latour the pastellist, and Chardin the painter of still life. Passy and district found favor in the eyes of royalty and the aristocracy. Four royal châteaux sprang into existence: the Château de Madrid, in the Bois de Boulogne; the Château de Chaillot; the Château de la Muette; and the Château du Coq, at Auteuil. The village boasted of three paved streets—the Grande Rue, now the Rue de Passy, which was the main road of the old village; the Rue Basse, now named the Rue Raynouard, winding along the crest of the hill and leading to many little estates, which had been built on the hillside overlooking the river and the beautiful valley of the Seine; and the Rue Bois-le-Vent, which led from the Château de la Muette to the Church of the Assumption. But of these and other glories of the time of Franklin little remains to-day. The domaine of the Chahus was swept away in 1820 to make room for a new quarter of six-story apartment houses; only one of the four royal châteaux—the Château de la Muette—still exists; and of the three paved streets but a small section of one of them, the Rue Bois-le-Vent, is known by its ancient name.

Among the many fine houses in old Passy was the Hôtel de Valentinois, the entrance to which was in the Rue Basse, at the exact spot where the building occupied by the Friars of the Christian Doctrine now stands. (Fig. 1.) In this splendid mansion it was that the Comtesse de Valentinois, in the reign of Louis XV. received the celebrated Madame Du Barry. However, its special interest to Americans lies in the fact that from 1777 to 1785 Franklin inhabited one of the small houses adjoining the property. The owner of the estate at that time was Donatien Le Ray de Chaumont, a great admirer of our country and countrymen, who refused to receive any rent from Franklin during the seven years he occupied his house. In the courtyard of the Friars' establishment can still be seen a small portion of the mansion; but of Franklin's house—the exact site of which, as a tablet unveiled on March 8, 1896, in the presence of the Hon. James Eustis, then United States Ambassador to France, indicates, was at the corner of the Rue Singer, where the Friars' chapel now stands—not a stone remains. (Fig. 2.) During the building of this chapel, however, the foundations were laid bare, so that, aided by contemporary records, one can give a tolerably accurate description of the statesman's residence.

It had two wings, each terminated by a belvedere, ornamented with balustrades and supported by Tuscan columns. In the right wing was a drawing-room, ornamented with busts, and, at the side,

FIG. 2.—THE SITE OF FRANKLIN'S OLD HOUSE.

The tablet has been placed on the wall of the Chapel, now occupying the site.

near a little quincunx, a conservatory. By means of a flight of steps in the courtyard, Franklin could reach a garden consisting of four separate plots surrounding an octagonal piece of water, boarded by two fine alleys of linden-trees, which were trimmed after the Italian style. Various contiguous buildings led to a gallery, filled with pictures and busts, at the end of which was a small bedroom and a terrace where Franklin could sit and take in a wonderful view of the Seine and its shady banks, in the immediate foreground, and of the wooded slopes of Issy, Meudon, and St. Cloud in the distance.

When not being fêted by the aristocracy of the neighborhood, or engaged, as he so frequently was, in farthering the interests of his country politically, Franklin spent part of his time in receiving visits from celebrated men and women. Early in the morning, when the weather was fine, he would go forth to take the waters of Passy, armed with a crab-apple stick which he never failed to carry on his walks abroad, returning immediately afterwards to study and attend to his immense correspondence. These ferruginous waters and the salubrious air of the district were the direct cause of the popularity of Passy, and undoubtedly one of the main reasons that induced Franklin to reside there. Doctors of the day affirmed that the waters were able to cure any disease, no matter how complicated. The springs—five in number—were situated half way up the hill which slopes down to the Seine, and can still be found as they existed in Franklin's time on the estate of the Comtesse Delessert, a splendid property of more than sixty acres, bounded by the Rue Raynouard and the Quai de Passy, from which an excellent idea of what other domains were like in ancient times can be formed. Among other well-known people who flocked to Passy in the eighteenth century to take these waters was Jean Jacques Rousseau. He was the guest of the Delessert family, and lived in a small house at the top of their garden—a house with a "vaulted salon," in which, as he relates in his "Confessions," he obtained the inspiration which enabled him to compose his opera "Le Devin du Village." This vaulted room can still, I believe, be seen under the shady parts of the park. Except to a few old inhabitants of unshakable faith, the Passy waters have long since lost their efficacy. Little by little their much vaunted reputation slipped away, so that to-day they are almost forgotten. Modern inhabitants of Passy are reminded of the existence of these five springs by a most picturesque passage, leading from No. 11 Rue Raynouard down to the Seine. (Figs. 3 and 4.) The Passage des Eaux, which was the principal means of access to the waters from the ancient Rue Basse, is one of the few parts of old Passy which remains unaltered, and, with the Rue Berton and a few other stony, tortuous streets in the near neighborhood, may be taken as an admirable specimen of the vil-

FIG. 3.—THE PICTURESQUE PASSAGE DES EAUX.

lage of one hundred and twenty years ago. In an account of the attractions of Passy at the latter end of the eighteenth century a few words must be said about the celebrated Ranelagh, a dancing hall which was opened in July, 1774, on the open piece of ground at La Muette, where the children of the modern suburb now play under the charge of their nurses. There, in 1778, a grand masonic fête was celebrated in Franklin's honor. He was the head of a Philadelphia lodge and the fête in question was given at the time of its affiliation with the French lodge of the Neufs

FIG. 4.—THE RUE BERTON.
A Bit of Old Passy.

Sœurs, of which the Princesse de Lamballe, an intimate friend of Marie Antoinette, was a member, for in those days ladies of the Court could belong to the Freemasons. The Ranelagh and its small theatre was destroyed in 1818 by a storm; it was rebuilt, but pulled down in 1837.

The fact that it was quite near the Ranelagh, in the gardens of the Château de la Muette, the scene of many a brilliant fashionable gathering, that Pilâtre de Rozier and the Marquis d'Arlandes, on Nov. 21, 1783, in the presence of Franklin, Louis XVI., the Queen, and the Court, made the first free ascension in a fire-balloon re-

FIG. 5.—LOUIS XV. HOUSE IN PASSY.
The former Cabinet du Physique of the King of France.

FIG. 6.—LOUIS XV. DOOR AT 58 RUE DE PASSY.

minds me that not far from that place there still stands an old house of Franklin's period which had some connection with the progress of science. It is situated at the corner of the Rue de la Pompe and the Rue de Passy, the entrance being at No. 84 of the latter street. (Fig. 5.) Viewed from the Rue de la Pompe, there is nothing very striking in its appearance; but, seen from the courtyard, its stone carving, its long, narrow windows, and its fine wrought-iron work, present a not unpleasing aspect. This house, which, by the way, is destined shortly to disappear, like so many other historical landmarks in Paris, was Louis XV. "Cabinet du Physique;" in other

FIG. 7.—THE CONVENT DES BONS-HOMMES.
From a water-color drawing painted by Renier Vinkelès in 1770.

words, the laboratory where the king's scientists carried out experiments. Louis XV., who took a great deal of interest in the scientific researches of the Abbé Nollet at the Enfants de France, had his laboratory transported from that institution to a building in the gardens of La Muette. In time this building became so crowded with experimental apparatus that it was necessary to find a larger place, so the king purchased the house now known as 84 Rue de Passy. At the beginning of the reign of Louis XVI., in June, 1774, the "Cabinet du Physique" was placed under the charge of two members of the Academy of Sciences, Marie Alexis de Rochon, known as the Abbé Rochon, and the physician, Jean Baptiste Leroy, second son of the

celebrated clockmaker to the king. The former devoted his attention to the science of optics; the latter to that of electricity. Both were close friends of Franklin, and received much valuable assistance and advice from him in the course of their experiments. Leroy, in particular, derived much benefit from his intercourse with the old statesman, especially when, at his house in the Rue Basse he erected the first lightning-conductor in France. This Louis XV. building ceased to be used as a laboratory in 1790, and since

FIG. 8.—THE OLDEST HOUSE IN PASSY.
No. 9 Rue Beethoven.

then, though not of recent years, has been the dwelling place of many celebrated people.

Among the relics of the past, two others have yet to be mentioned. One is a massive carved Louis XV. door, ornamented with wrought-iron work, at No. 58 Rue de Passy, which is worthy of more than a cursory glance; the other is a house at No. 9 Rue Beethoven, a street which in narrowness and filthiness, strikingly recalls a London slum. (Figs. 6 and 7). This house, judging by its high roof and mullioned window, is the oldest in Passy; and it has an additional interest to the antiquarian as being the place where, more than a century ago, the inhabitants of the village paid their taxes.

FIG. 9.—VIEW OF ONE SIDE OF THE TROCADÉRO HOTELS.

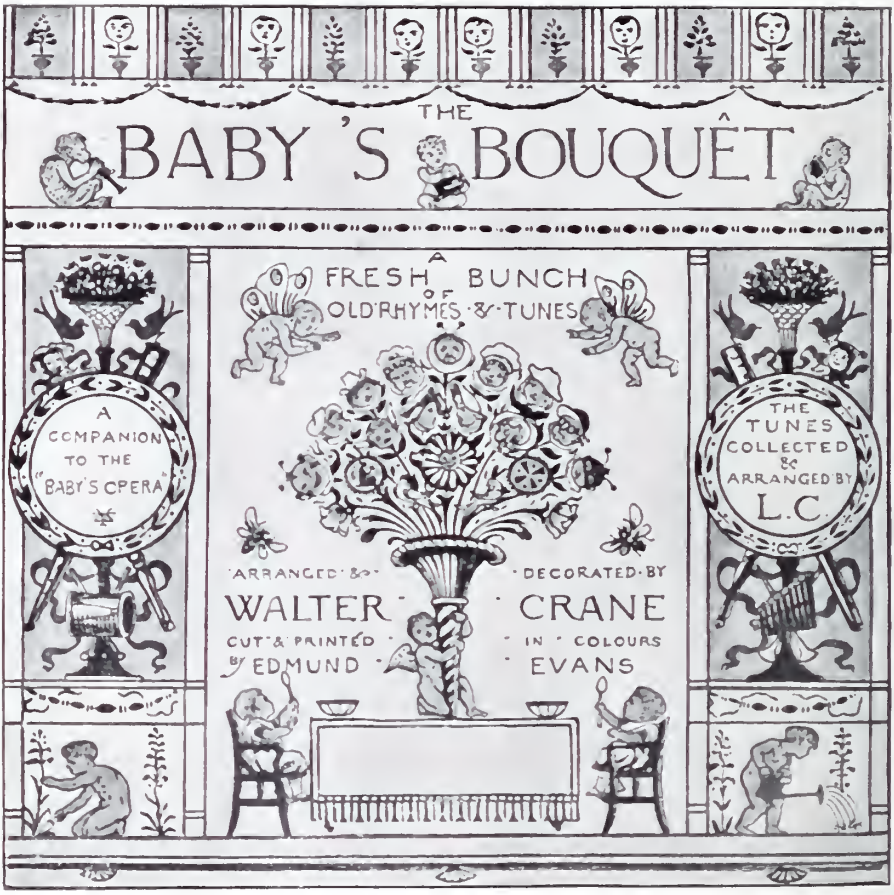
FIG. 10.—A PRIVATE HOUSE ON THE BOULEVARD DELESSERT.

FIG. 11.—APARTMENT HOUSE ON THE BOULEVARD BEAUSÉJOUR.

At the time when the Couvent des Bons-Hommes existed on the site of the modern Boulevard Delessert, as represented in Renier Vinkelès' watercolor drawing of 1770, the Rue Beethoven was in direct communication with that religious establishment and the center of the village (Fig. 8.) Nowadays, its importance has gone—it is a back street of no account, inhabited by the poorest of the poor; a veritable eyesore to the fine new buildings which, on almost every side, have hemmed it round.

Compare this squalid "cul de sac" with the fine streets and avenues of the modern suburb, its tumble-down houses with the massive Trocadéro Hotels, which tower above it, with that elegant little private house on the Boulevard Delessert, hardly a stone's throw away, or with that magnificent new apartment house on the Boulevard Beauséjour, and we shall be able to judge of the immense progress which Passy has made since the days of Franklin. (Figs. 9, 10 and 11.) Modern Passy, which may not inappropriately be said to bear the same relation to Paris as the quarter bounded by 90th and 125th Street, 8th Avenue and the Hudson River, does to New York, has now a multiplicity of means of communication with Paris equal, if not superior, to those in our own city. The hired vehicles of a bygone century, lumbering over stony roads, have given place to the Ceinture Railway, the Metropolitain Electric Railway, several lines of compressed air trams, horse-trams, omnibuses, and the swift gliding steamboats on the Seine. The village which Franklin made his home for seven years of his life had but a few hundred inhabitants, and even at the beginning of the Nineteenth Century the population numbered only 1800. But in 1820 it had risen to 3,034, in 1836 to 5,702, in 1856 to 17,594, in 1896 to 84,948, and at the last census to 121,131. As the population has increased, so has the price of land risen to extraordinary sums. Whereas, in the time of Benjamin Franklin, a plot 25 by 100 of land could be purchased, nearly anywhere in Passy, for 396 francs, it now varies between 79,200 francs and 92,400 francs, in the Rue de Passy, and has been known to fetch, in such thoroughfares as the fashionable Avenue Henri-Martin, as much as 158,400 francs! Could better proof be given of the advance which the most pleasant suburb of Paris has made than these eloquent figures?

Frederic Lees.



TITLE PAGE TO BABY'S BOUQUET.

Designed by Walter Crane.

ENGLISH DECORATION AND WALTER CRANE.*

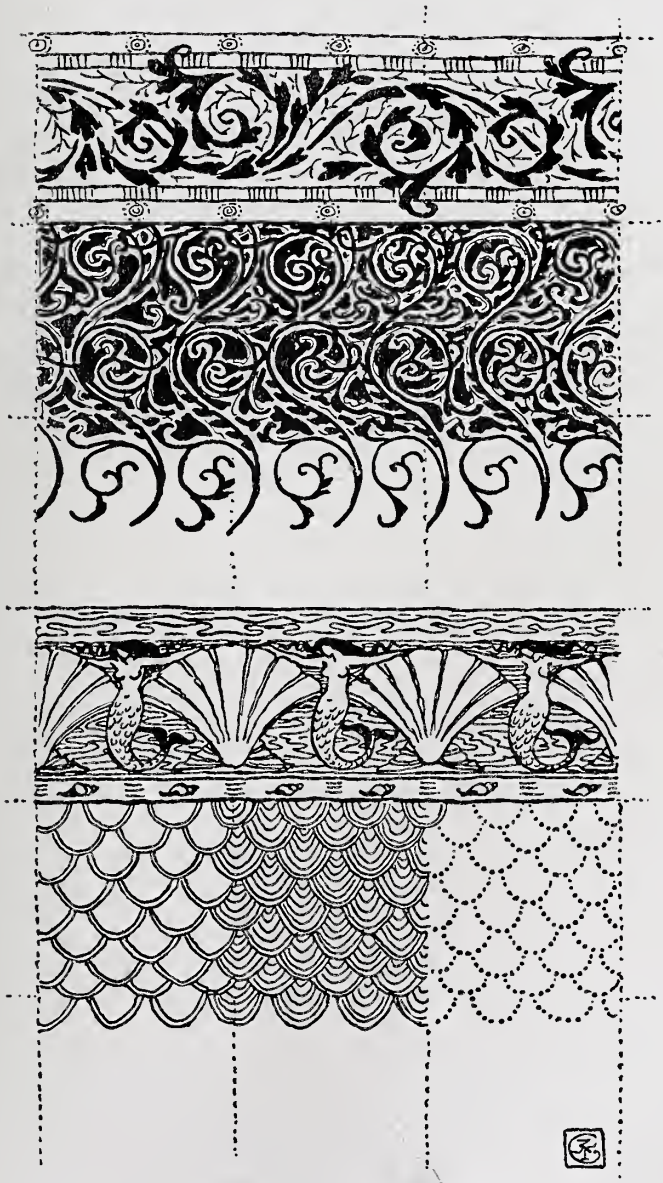
EVERY now and then an instance is given us of the very singular difference of point of view between our American writers and thinkers on fine art and their English congeners. Brethern they be; but they are hardly akin in any true Scotch sense—they are hardly of the same *kind*—they do not stand by one another. The concurrence of opinion among the small body of artists in this country who determine the line of thought in matters of fine art is as different as may be from any similar concurrence of opinion which could be obtained in London.

The fact that American thought is almost wholly drawn from other sources than Great Britain is the chief and perhaps sufficient cause of this divergence. For what are the curious and unexampled facts in this particular case? Great Britain has an old established school of art, not, indeed, coherent and in any way organized as are some of the Continental schools, but more independent of the rest of the world than any other school can claim to be. Great Britain is very much affected by the fact that Ruskin lived and preached and labored in England and Scotland, and by the fact that no Englishman would, of his own option and freely, say in print that he thought Ruskin's influence was either slight or injurious—however much he might think so. Great Britain is, moreover, the land in which the leaders of thought in literature, sociology, and the like, ignore the fine arts of design far more than the people of any other modern race with whom we have to reckon. The United States, on the other hand, is an as yet untaught mass of people, forming not one community but many, which, indeed, coalesce easily in all political and national matters, but not at all in matters of opinion; and having within it a small body of very highly taught artists, some of whom can write and speak as well as paint or model, or, indeed, in some cases, write and speak far better than they can paint or model. Such persons exist, indeed, in every artistic body, whether large or small, and their work may be as important as that of the more successful artists. The American thinker on fine art feels himself to be backed up by the traditions of the great past, brought to him, indeed, through a French teaching in the first place, but made independent of that teaching by his own almost unhampered processes of thought. He, far more than the Englishman (so he thinks) has had all the past of Europe to look at with equal eyes, with eyes of respect and delight and awe, and he takes in the

*"The Art of Walter Crane." By P. G. Konody. London: George Bell & Sons, 1902. (New York: The Macmillan Co.) Pp. xiii., 149.

many manifestations of the artistic spirit during the past six hundred years with, (as he thinks), a larger sympathy and a stronger grasp than can the man of insular traditions. Granted the exceptions, both ways, and never forgetting the noble thinking done by two or three Englishmen whose names are constantly with us, and the above statement may be a fairly accurate one of the essential difference of the point of view between the little crowd of American thinkers on art and the considerably larger body of English workers in the same direction.

It is said above that the Americans and the Englishmen can never agree as to Ruskin, and this mainly because Ruskin is an Englishman and, in Englishmen's eyes, one of the literary lights of the nineteenth century. It seems to be nearly in that way that we account for the respect shown in England for the work and the influence of William Morris and again of Walter Crane. If we concern ourselves with William Morris as the producer of actual designs of decorative purposes, it is hardly to be imagined that we, that is the artists of the United States, will ever accept that contribution to the art of the past century with any gratitude or any marked complaisance. We will try to clear our minds of all association with Morris, the sociologist, or the narrative poet and the reproducer of Froissart for the modern Englishman, and if we do so there is left but little, nor would any number of persons of "light and leading" on the western side of the Atlantic accept Morris's work, taken altogether, as being of any great consequence. It is somewhat so with the work of Walter Crane. Put out of mind the sociologist and the advocate of certain theories of design, and consider only the designs that we have had before us, during thirty years, in book illustrations, in elaborate title pages, in wall papers, in tablets and bas-reliefs, in painted friezes and in "easel-pictures" —all alike are of but little weight. As, however, our object here is to show the best there is of him, the writer has spent some hours in making the best possible selections of purely decorative pieces from the richly illustrated book named below, and it is from these and from other of the most impressive pieces that any conclusions here given are drawn. The title page to the Baby's Opera with the Oriental looking stage setting, the row of footlights and the cat and the dog occupying the place of the orchestra, is a pretty design, and the pilasters at the side with the natural Renaissance scrolls happily replaced by groups of children's toys, and the three white mice forming a sort of frieze below make a setting even better than the central composition. The title page to the Baby's Bouquet is still better in the distribution of the parts, though there is perhaps less immediate significance in it. One may enjoy very heartily the



DECORATIVE FRIEZE.

Designed by Walter Crane.

contrast between the babies with their spoons and bowls and the winged babies above, and him who holds up the anthemion in the middle, a gorgeous breakfast-table centre piece if ever there was one! And there are still other babies, the two naked ones below who are cultivating their garden, and the little orchestra above of a satyr child, a human child and a monkey, perhaps; all that is very clever and the disposition of the parts is still better. These two books were published in 1877 and 1879, and "Pan Pipes" which followed them were of interest to us and to our children when they first appeared. The earlier books were, indeed, attractive for the moment when contrasted with the feeble books for children of the time; this present writer remembers being interested for a moment in the strong, flat colors in Beauty and the Beast, the Yellow Dwarf, and the rest; but such a feeling could not last long. The ineffably beautiful work of Caldecott was laid beside it, if it were children's books that one was seeking for, and then Mr. Crane himself, in search perhaps for greater refinement, went off into the feeble delicacies of The Baby's Own Æsop, and, without great change, into the artistic insignificance of Flora's Feast, the last not, indeed, a child's book in any limited sense. The Masque of Days, in 1901, finishes the list of the books given at the close of the present volume, although the designs here reproduced are not the best of that collection. Certainly no drawing upon the margin of a page was ever less significant than the April Fool.

But to leave the books, and to take up the matter of pure decoration, in which, perhaps, the best record may be thought to be made, the May Tree frieze is certainly an attractive composition and one can see how easily, by slight changes in the drawing of the blossoming tree and the trunks behind it, such a frieze may vary as it runs around a room, may vary just enough for variety while retaining always sufficient unity. Wall papers are given in this book rather freely, all of them "by permission of Messrs. Jeffrey and Company" and the writer confesses to having no acquaintance with these wall papers except as seen in these reproductions, which cannot be trusted to allow of a uniformly just estimate. Changes in scale, a substitution of color for gray and white, destroy any possibility of being sure of the result in wall decoration of a design shown here in half-tone. The colored plates, of which there are three, are more to the purpose, of course, but unfortunately we cannot reproduce them here. One of those given in color, "Rose Bush Paper" with "Lion and Dove Frieze" is surprisingly good. If all the wall papers were as good as that the community might move in the matter and give Mr. Crane a chance to carry out with the brush, and with turn of wrist and caressing of fingers, such designs as are really too refined to be entrusted to the rudely-en-

THE "NATIONAL" WALL PAPER.

Designed by Walter Crane.

graved wood-block, and the flat printing-off. After much consideration it is decided to give here the wall paper called the "National," where the military saints, Saint George, Saint Andrew, and Saint Patrick, each forming the centre of a well-designed circlet, broken by the pennon and the staff of its lance, alternate with escutcheons charged in a curious, fantastic way with the arms of the United Kingdom. Finally, we will look at a photograph of the lead tablet set up on the house in London in which Turner lived and worked, a design which would be perfectly successful but for a certain look as if it were determined to be a design at any cost. The more a man plays with lettering, which is one of the most delightful things for the decorative artist, the more he is inclined to make the letters simple—that at least is what an experience of architectural work, ancient and contemporary, leads to.

LEAD TABLET UPON THE HOUSE IN WHICH TURNER LIVED.

Designed by Walter Crane.

To most persons who examine this volume there will be something of a revelation in the number of easel pictures described in it and even reproduced in photograph. It is hardly the most important thing for columns of this journal to undertake, and this is fortunate, for the merits and shortcomings of these compositions would require very careful consideration that injustice should not be done them in either direction. In a curious way they are the visible work of the decorative artist, and yet they are loaded with thought of the non-artistic sort—with sentiment, with association, with moral teaching of all kinds. It is hard enough to criticise aright such work as this when done by a recognized master of moralizing art, such as Watts: it is a comfort not to have to do it in connection with a less able designer.

Concerning the text of this book, it must be said that the author has been entirely straightforward and consistent in his attempt not to over-praise the separate works of his hero; that he refuses to make a hero of him, and tries, at least in the separate examinations

of this and that branch of his work, to speak calmly and to express deliberately formed opinions. He is careful, too, to quote Mr. Crane's own opinions and hopes, especially in the first chapter. "Art and Socialism;" for in Crane as in Morris the social idea was always very close to the artistic aspiration. The reflections upon an artist of this character of a clear-headed and friendly critic cannot fail to make an interesting book. There is underlying it all, however, the feeling that somehow the artist is of very great importance—of very high rank—allusions to his greatness and his excellence in a general way are always coming into the argument; and we come back to the sentences in which this article begins; it is not that the United States and Great Britain, speaking through their students of art, would differ so much in their opinions of any one work of art, as that their notions of what is really important to the modern world would differ very widely.

Russell Sturgis.

THE MEETING OF TWO STREETS ON A PARIS SQUARE.

THE PLAN OF A CITY.*

The Rectangular Plan.

AS everybody knows, the City of New York—with the exception of the downtown districts, which already existed—was planned out by commissioners appointed in the beginning of the nineteenth century to determine the lines which the city should follow in its growth. The New York of to-day is their workmanship to the very letter. It is the triumph of the straight lines. The sight of that endless series of straight streets has inspired a literary friend of ours to compose a ballad in prose which we take the liberty to quote:

"In straight New York, Broadway runs riot."

Broadway.

On a chess-board, imagine a line cutting the squares it traverses, into obtuse and sharp angles, all equal geometrically to two right angles, doubtless, but in reality, so different: this is Broadway crossing New York.

New York's birth was a natural one: a settlement of houses placed right and left on the extremity of a narrow tongue of land; houses upon houses, streets upon streets, churches upon churches, that had grown according to the increasing necessities of life, in picturesque irregularity. Each street received a name. New York was formed like every city in the world, and it did not lack charm.

When, on a sombre day, the councils of the city reunited, councils composed of grave men with shaved upper lip and round beard covering the chin. The eldest member arose and spoke:

"Brother citizens, complaints of the disorder and irregularity of our town multiply; the license of our streets is extreme; they cross at all manners of angles, stretch out or stop, according to their good pleasure, and assume fantastic names difficult to remember, whose origin is often obscure and even vulgar. This is contrary to propriety and good policy. There are, moreover, graver faults: wasted grounds, little fields that some call parks, oval and strange shaped places. This scandalous state of affairs must not be allowed to continue.

"I propose that we decide upon a general plan, by which our dearly beloved city may be properly developed, and which should bring order and correction to the scattered flock of our houses.

"Let us divide the land of the peninsula of Manhattan in equal

*See also "Art in the City" in the November Number of Architectural Record.

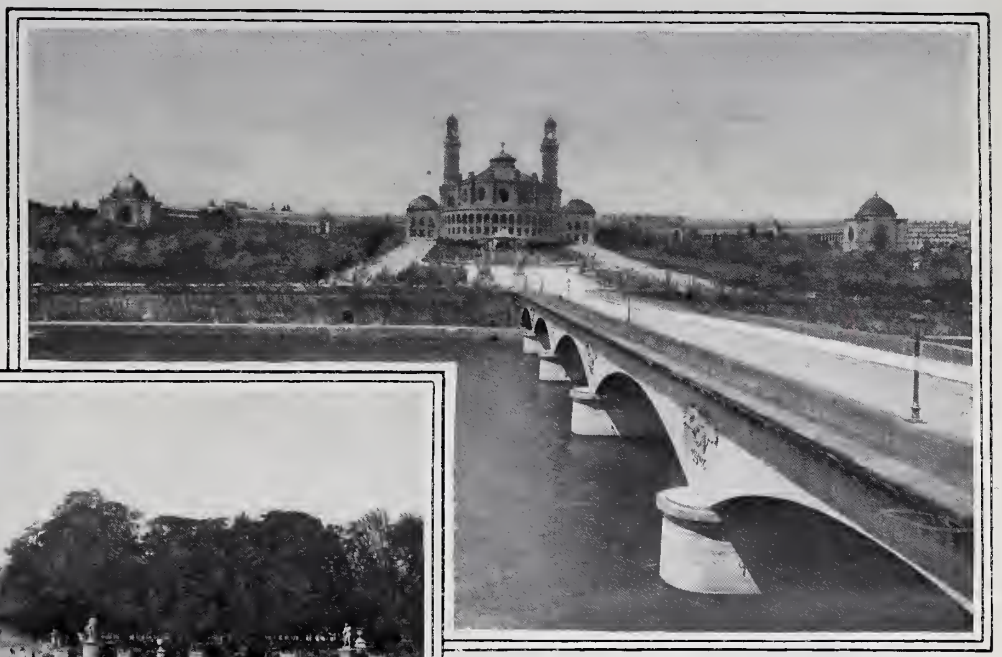
rectangular lots, where the streets will reach from the Hudson to the East River; perpendicularly, throughout the entire length of the city, may be traced avenues. Let us make away with the use of sonorous names; let us number them from south to north; let the avenues be counted from one to ten, the fifth serving to divide the east and the west of the city. In this manner all will become clear and arithmetical, and our children going to school in the morning can measure, by the number of the blocks passed, the number of

GARDENS IN THE HEART OF PARIS.
The Louvre, the Tuileries Gardens and the Champs-Elysées.

miles accomplished; twenty blocks being equal to one mile, or to sixteen hundred and nine of those metres which the French people, who love change, have adopted as measurement."

Having spoken in such wise, he spat on the floor, and held his peace.

Everything was done according to these proposals. Old New York was left as it stood, and lots for the new town were traced on paper up to two hundred and I know not what number. And young New York, from that time on, grew like a child in an orthopædic



A FINE PROSPECT.
The Tuileries Garden, the Obelisk, and the Arc de Triomphe. Total length, two miles.

A MONUMENT AT THE END OF A BRIDGE
The Pont d'Iéna and the Trocadéro.

THE PLAN OF A CITY.

corset. There were no places set apart in the plan for sparkling fountains under shady trees; no edifice to interrupt the monotony of eternally straight and parallel lines; and the streets, each with its number like a convict in a prison; and the avenues, all the avenues, stretched onward, onward indefinitely, with the sky for background; and not an inch of land lost: all is geometrically correct and convenient for the little children, who, going to school, measure, by the number of blocks they pass, the number of miles accomplished.

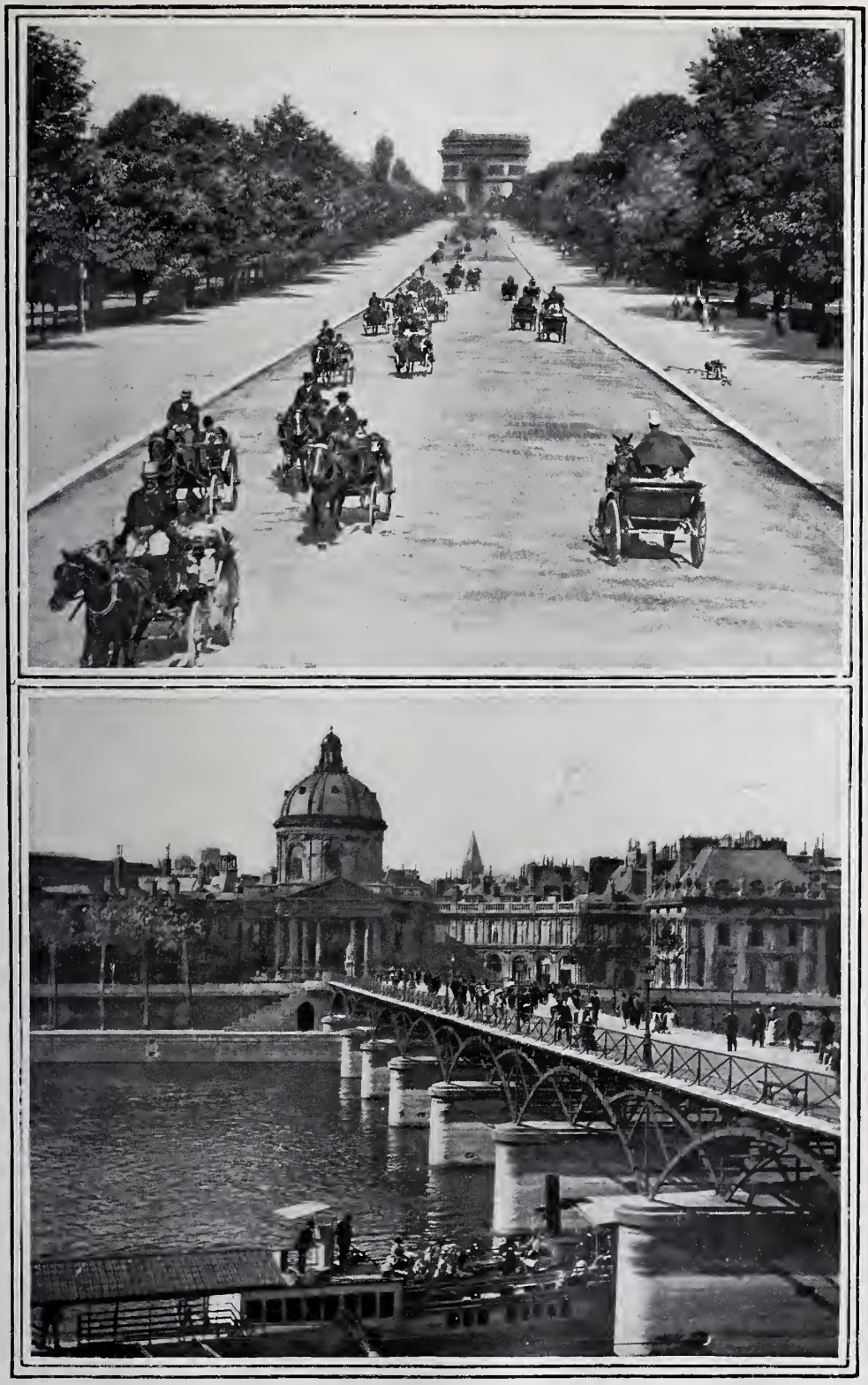
But, in the general regularity, one street emancipates itself Broadway, from the south to the north of the city, traces its diag-

A BRIDGE AND A MONUMENT.
The Fountaine St. Michel, disguising the blank wall caused by the meeting of two streets.

onal line, makes even a bend—impossible as it may seem—at Grace Church, and, maintaining its name and individuality, runs in adventurous manner across the chess-board, making merry upon meeting her little sisters, so well balanced and keeping straight file, saluting such proper ladies as are the avenues; here leaving a strip of land so narrow that it cannot be built upon—a lost space; there mingling tumultuously with the life of another artery, destroying all frightful symmetries and creating all along its course picturesque fantasy.

"In straight New York, Broadway runs riot."

The commissioners who committed New York to the rectangular plan incurred a grave responsibility. They mortgaged the future.



1—ONE OF THE AVENUES CONVERGING ON THE ARC DE TRIOMPHE.

2—THE PONT DES ARTS AND THE INSTITUTE.

modern New York is their handiwork *ne varietur*. For a task of that sort men of genius were needed—men able to foresee the city's immense growth, and imbued with a strong sense of the beauty which cities ought to have. Unhappily, they were simply engineers —men devoid of all imagination. Their work proves only too clearly that they also lacked intelligence.

Nothing is more tiresome than an infinite number of perfectly straight streets and avenues running on and on until they lose themselves in the sky. One goes along them without ever seeing an edifice closing the vista. There is a terrible monotony about a city each street of which is the counterpart of its neighbors. The

A LUXURIOUS AVENUE.

The Avenue des Champs-Elysées and the "Chevaux de Marly."

ideal for a city to aim at is not that the newly arrived stranger shall be able to dispense with a map and find his road unaided.

The commissioners of 1812*—whose names ought to be execucrated by every inhabitant of New York—left little space for parks. Let us quote their report:

"It may be a matter of surprise that so few vacant spaces have been left, and those so small, for the benefit of fresh air and consequent preservation of health. Certainly, if the City of New York

*The Legislature, on April 3, 1807, appointed Governor Morris, Simeon de Witt and John Rutherford, Commissioners of Streets and Roads in the City of New York, with "exclusive power to lay out streets, roads and public squares. . . ." The city plan established by the Commissioners is substantially that which exists to-day between Houston and 155th streets. ("A History of Real Estate," etc., in New York City.—Record and Guide.)

was destined to stand on the side of a small stream, such as the Seine or Thames, a great number of ample spaces might be needful. But those large arms of the sea which embrace Manhattan Island render its situation, in regard to health and pleasure, as well as to convenience of commerce, peculiarly felicitous. When, therefore, from the same causes, the prices of land are so uncommonly great, it seems proper to admit the principles of economy to greater influence than might, under circumstances of a different kind, have consisted with the dictates of prudence and the sense of duty."

What wise commissioners, and what well-placed economy! In the middle of the century Central Park was opened, and at the end

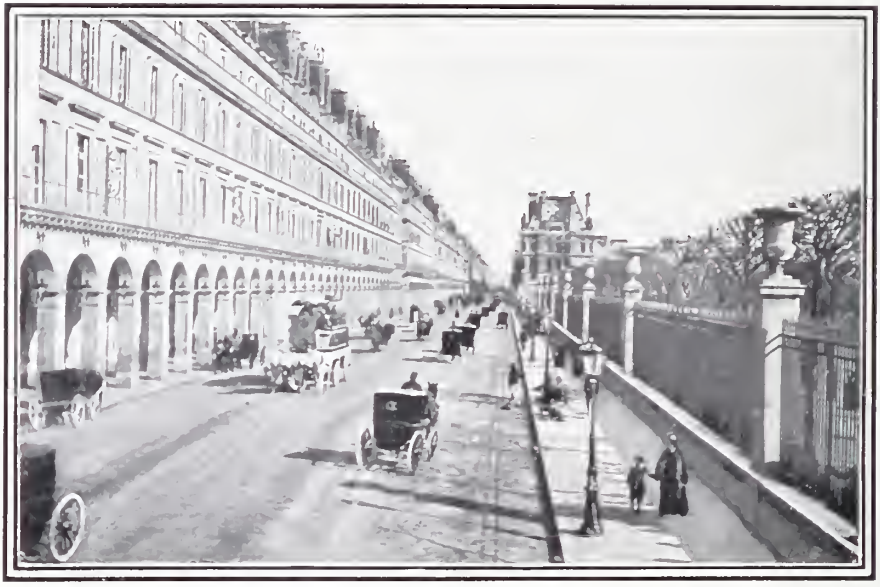
AN AVENUE IN A FASHIONABLE DISTRICT.
The "Carré Marigny" in the Champs-Elysées, with trees, lawn and flower beds.

of the century Riverside was planned; but all the rest of the city, as far as One Hundred and Fifty-sixth Street, is practically without parks or gardens, as those wise commissioners wished it to be.

The commissioners, after choosing the abominable rectangular plan, had not even sufficient intelligence to foresee that certain districts of the city would be centers of luxury. Having traced the long avenues and decided that Fifth Avenue should divide the city, they ought to have foreseen that that thoroughfare would, some day or other, become the main avenue of New York—that all the luxury of the city would gravitate thereto, and, in view of this, they should have planned it two or three times as wide as the other avenues. They did nothing of the kind, and now Fifth Avenue is a

narrow, treeless, congested avenue, the like of which would not be tolerated by a provincial town at any price.

Suppose, on the contrary, that there existed, between Madison Square and Central Park, an avenue three hundred feet in width, planted with trees on either side of a spacious roadway, with broad sidewalks, and a continuous series of flower beds, clumps of shrubs and patches of well-kept grass—in fact, something similar to the Avenue des Champs-Elysées in Paris; and suppose, further, that this avenue was bordered by the palaces of American millionaires—Silver Kings, Petroleum Kings, and other monarchs. In that case



RUE DE RIVOLI.
The type of uniform street fronts.

New York would possess a central artery worthy of the city and the renown of which would be world wide.

Let the new cities of the United States profit by New York's experience and take care not to follow her example.

Leaving now the question of plan, which, as far as New York is concerned, is one which cannot be reopened, let us see what are the rules observed by the City of Paris in the embellishment of that capital. We shall find that heavy sacrifices have been made to the shrine of aesthetics.

Height of the Houses.

In Paris, the height of the houses is limited, the limit varying according to the width of the street on which the house is located.

THE PLACE DE LA CONCORDE.

Decoration of a square with fountains, balustrades, commemorative statues and lamp-posts with one and two branches.

Nothing could be better. Hygiene requires that the sunshine find its way into the narrow streets as well as into the broad thoroughfares; while, speaking from an aesthetic point of view, what can be expected of a street where a house of two stories is flanked by a sky-scraper of twenty? Hence, there is a certain harmonious symmetry about Paris streets. One cannot imagine a house of twenty-five stories on the Place de l'Etoile, facing the Arc de Triomphe. Millions are going to be spent in New York upon the construction of a superb library. The architects are highly cultivated men, and men of taste. They will put up an edifice which will do honor to the city. This edifice is going to stand in a small garden bordered on its four sides by streets, the houses of which are still, at the present

THE TREES OF PARIS.
The Boulevard de la Madeleine.

time, of a reasonable height; but once the library is built, the neighboring ground will rise in value, and it is probable that before ten years have passed the existing houses will have given place to immense sky-scrapers. Surrounded by these monsters, the library will appear insignificant, and the architectural effect will be destroyed.

The Paris municipal regulations are also very strict in regard to the fronts. In certain streets uniform fronts are insisted upon: such is the case, for instance, with the Rue de Rivoli, which is bordered by arcades; and so, too, is it with the Place Vendôme. We like the picturesque, but it must be admitted that very fine effects can be produced with symmetry and uniformity.

Rules, however, can only be restrictive: they prescribe height, alignment and relief. Therefore, the municipal council, desirous of exciting a desire for embellishment, has instituted an annual house-front competition. The winning houses are exempted from certain city taxes. Landlords thus have a monetary interest in trying to give their houses a handsome appearance. Competitions of this kind—which can be organized by private associations if the city council proves indifferent—maintain a certain standard of art. They might, in the long run, exercise a very salutary influence, especially if the terms of the competition were sensible ones—that is, if the prizes were to be awarded, not for luxury, but for taste, and could

A BIRD'S-EYE VIEW OF THE PARIS TREES.
Paris taken from the Eiffel Tower, by special permission granted the Architectural Record.

be competed for by the well-built workman's cottage, as well as by the sumptuous palace of the millionaire.

Amongst other excellent rules laid down by the City of Paris, we will cite the one which forbids trolley tram lines inside the city. Within a few years' time, the metropolitan system of electric railroads (chiefly underground) will be complete. It will comprise half a score of lines running through every district of Paris, which will then be the city which will have best solved the knotty problem of rapid transit. Nobody can deny that the New York elevated railroad, commodious as it may be, is a standing eyesore, just as the noise of the trains, running at the height of one's first floor windows, is a permanent offense to the ears.

Jean Schopfer.

RESIDENCE OF WILLIAM J. SCHIEFFELIN.

No. 5 East 66th Street, New York City.

Hunt & Hunt, Architects.

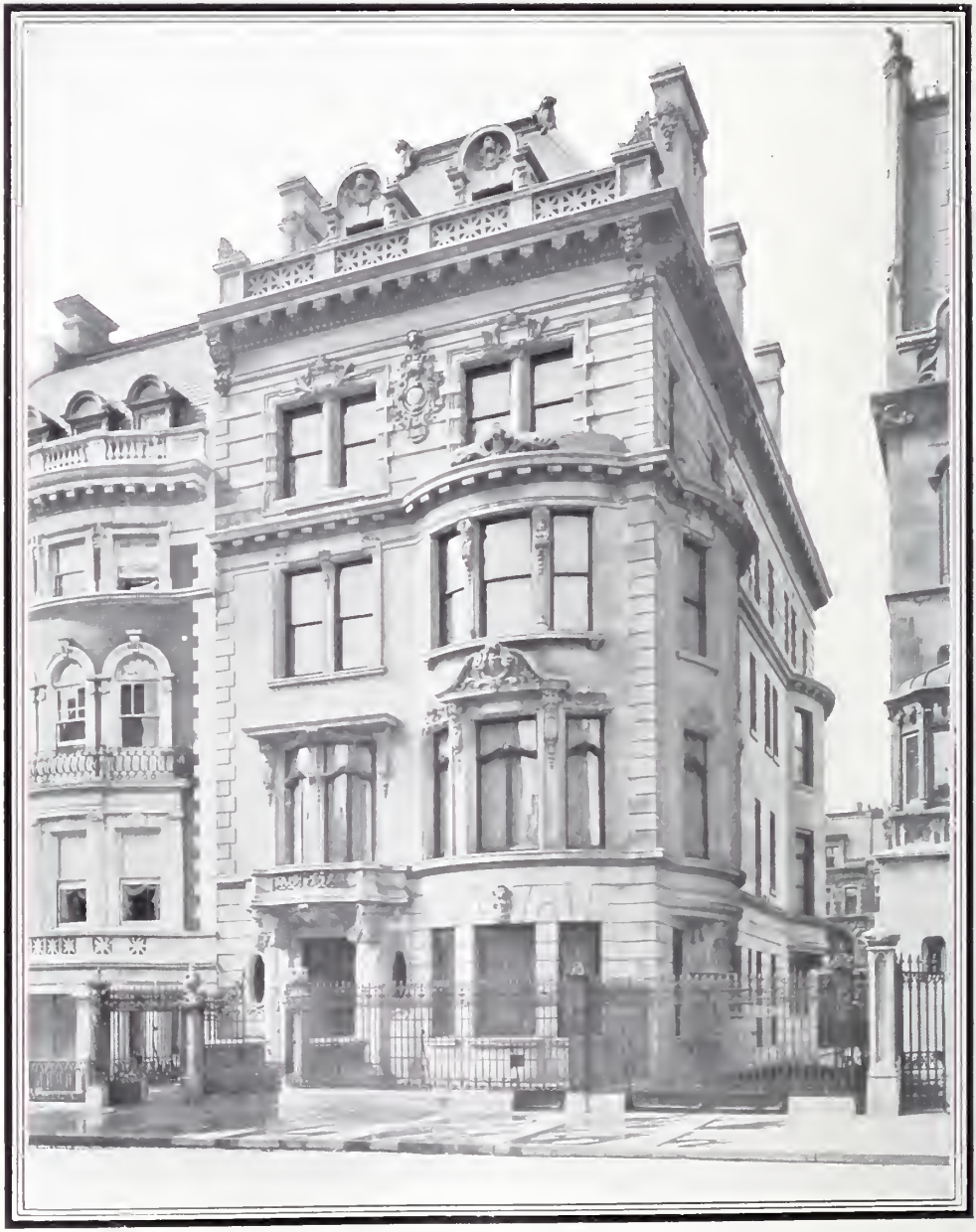
THE CONTEMPORARY NEW YORK RESIDENCE.

IT is an extraordinary fact that at the present day, there is practically only one class of private dwelling erected on the island of Manhattan—the dwelling intended for comparatively rich people. It is true that the Borough of Manhattan is not the whole of New York; and it is true that after the Subway is in operation, there may be erected on Washington Heights residences that cost less than $20,000; but the fact remains that this section of the city, which twenty-five years ago was chiefly a collection of private dwellings, small and great, has now no room for a building of that description, which does not cost with the land at least $40,000, and there are singularly few now under construction, which can be bought for any such price.

The truth of this statement can be very completely confirmed by an examination of the records of the Building Department. The following table shows the number of dwellings, plans for which were filed each year from 1889 to October 1st of the present year, and the varying amounts these dwellings were estimated to cost:

	No. dwellings.	Estimated cost.	Average per dwelling.
1902 (January to September)	120	$7,793,500	$64,000
1901	99	5,927,000	59,800
1900	112	3,928 000	35,000
1899	338	8,329,700	24,600
1898	339	6,182,800	18,200
1897	492	7,492,100	15,200
1896	410	5,527,950	13,400
1895	515	8,799,750	17,000
1894	494	8,606,160	17,200
1893	511	9,516,750	19,000
1892	710	12,625,500	17,500
1891	661	11,225,500	16,900
1890	835	12,663,000	15,100
1889	759	12,733,000	16,700

This table tells a very remarkable tale. From 1889 to 1892 there were plans filed for about 700 dwellings each year to cost in the neighborhood of $12,000,000, the average cost of each dwelling being from $15,000 to $17,000, and the average price of the house when completed about $25,000. After 1892 the number of the dwellings for which plans were filed diminished, with the exception of the year 1897, anywhere from a third to a half, the low water of this period being reached in 1899 when plans were filed for only 338 dwellings. During the same period the average estimated cost of each dwelling had increased to $24,600, which would mean that at this stage the typical residence sold for about $35,000. Then came a sudden and remarkable change in conditions. In 1900 plans were filed for only 112 residences, in 1901 for



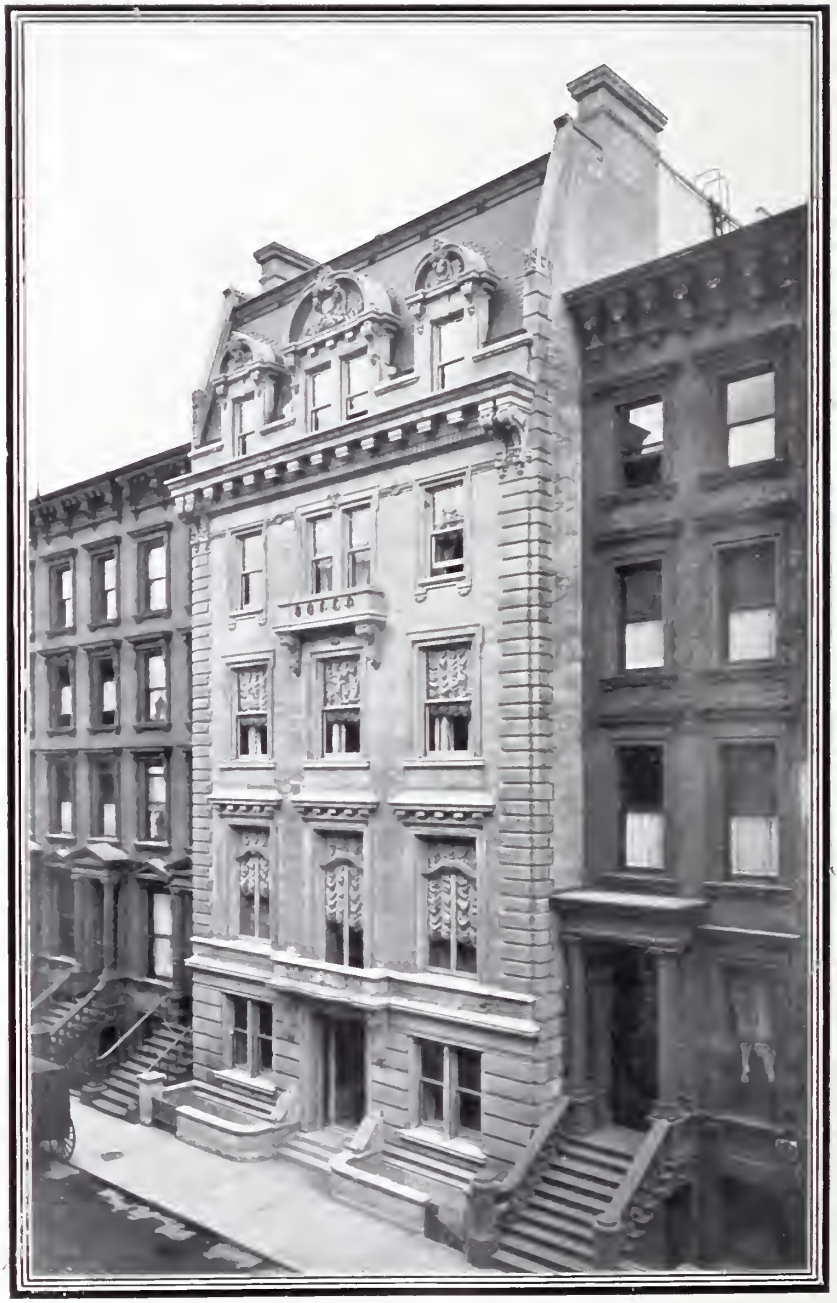
RESIDENCE OF E. J. NICHOLS.

No. 4 East 79th Street, New York City. C. P. H. Gilbert, Architect.

only 99, and in the first nine months of 1902 for only 117; but at the same time, there was an extraordinary increase in the average estimated cost of each dwelling. In 1900 it had jumped to $35,000, in 1901 to $59,800, and in 1902 to $66,600. When it is remembered that a residence which costs $66,000 to build, must represent to its purchaser a total expenditure of at least twice that sum, it will be realized to what an extraordinary extent have the conditions, under which dwellings are erected in Manhattan been revolutionized.

The causes of this radical transformation are both numerous and complex. Primarily it is due to the steady increase in the value of real estate in Manhattan—particularly in those parts of the Borough which were more or less easily accessible by means of the elevated roads. During the period included by the table above, the West Side was the great area of improvement, and until within a few years from one-half to two-thirds of all the money invested in private residences was spent in that district. But with the increased value of land there came to be an ever stronger tendency for apartment houses to take the place of private dwellings, and this tendency was suddenly accelerated in 1898 by the introduction of a new and very popular type of seven-story flat. So many of these flats were erected within a year or two that values were forced up beyond the reach of the builders of inexpensive residences, and a sudden diminution of the number of such residences erected took place. Thus, whereas ten or twelve years ago about five hundred private dwellings were built annually upon the West Side, in 1900 plans were filed for only 68 residences to be erected in that district, and in 1901 for only 28. The average estimated cost of these buildings reached in the second named year the figure of $33,200.

Coincident, however, with the economic unavailability of private residences, came an unprecedented demand for dwellings of a more expensive kind. Prosperity was beginning to have its effect. Poor men had become rich. Rich men had become richer than ever. The very rich from all over the country were flocking to New York, and seeking dwellings regardless of cost. At about the same time it became definitely settled that there was only one section of the city, in which people who were both rich and fashionable could live. Time was when a migration of such people to the West Side seemed possible; but this is no longer the case. Occasionally a millionaire like C. M. Schwab cuts off a big slice of the Riverside Drive for his own particular use; but these are exceptional cases. The region east of the Central Park and south thereof between Madison and Sixth Avenues, to about Thirty-fourth Street, has been designated as the one fashionable district. Within this area much of which has already been built over once, resi-



RESIDENCE OF HENRY SELIGMAN.

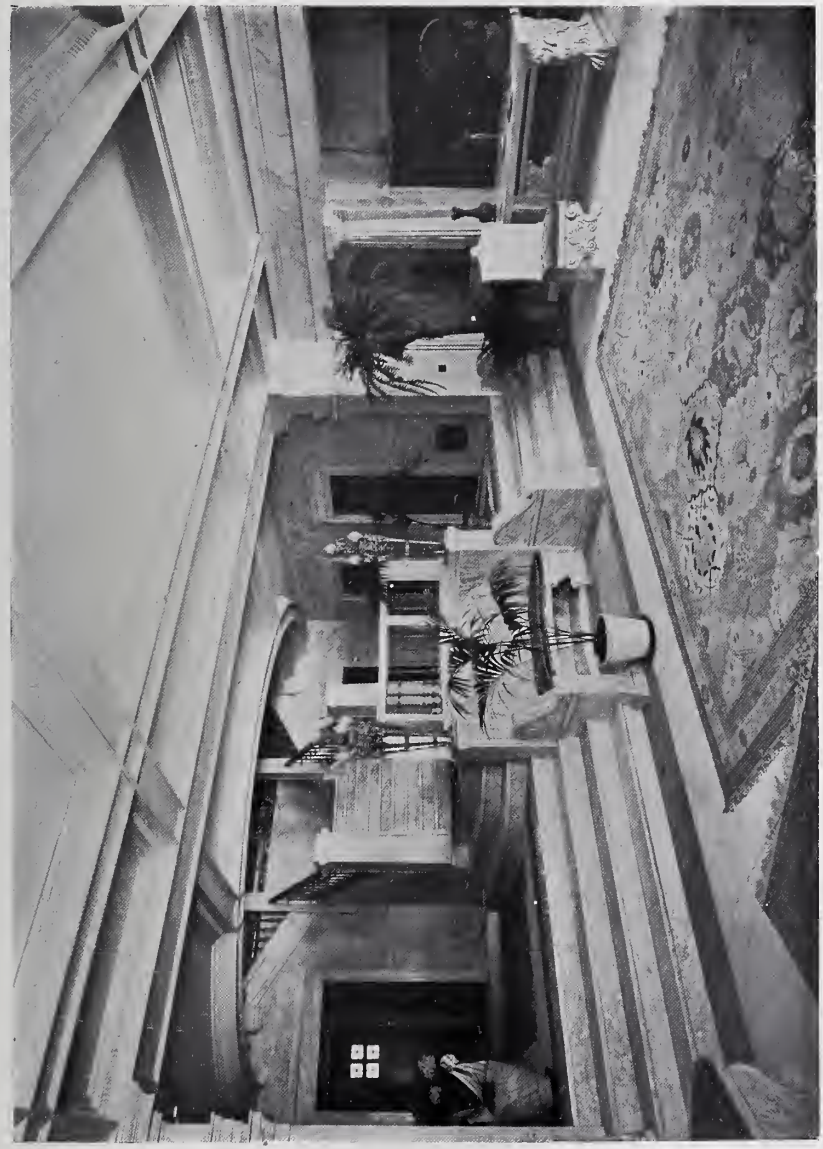
Nos. 30-32 West 56th Street, New York City. C. P. H. Gilbert, Architect.

dences are not only not giving way to apartment houses, but they are aggressively displacing the larger, though in this case the cheaper buildings. Six and seven-story apartment houses have been torn down to afford room for five-story residences. Between $70 and $80 a square foot has been paid for desirable Fifth Avenue corners, and all over the section a twenty-five foot frontage is cheap at $75,000. The figures tell the story plainly enough. In 1901, although plans had been filed for only 28 dwellings to be built in the district west of Central Park, plans were filed for 36 dwellings to be erected east of the Park, the average cost of each dwelling in that district being no less than $91,700. During the first nine months of 1902, the figures apparently, but only apparently, tell a different story. Plans were filed for 31 dwellings to be erected west of Central Park, at an average cost of $71,600 for each dwelling, but this list contained Mr. Schwab's $900,000 residence, which raised the average considerably, and 18 houses, plans for which were filed by the Clark estate. Both of these operations were exceptional, considering present conditions in that part of the city. On the other hand, the district east of Central Park is to be credited with plans for 30 residences, to be built at an average cost of $72,600 each. It is in still another section of the city, however, that the filings are most remarkable. In the district south of Fifty-ninth Street every residence erected means another building destroyed; and during the first nine months of 1902 plans were filed for 29 private dwellings to be erected at an average cost of $96,900 each, and if to these were added the plans for residences that were so radically altered as to be practically new buildings, the number would be doubled. All of which goes to show that in Manhattan there at least is one class of building that is not only clinging tenaciously to its present location, but is even displacing other kinds of buildings which in the past have crept into its vicinity.

It will be seen from the above that residences are now being erected in the Borough of Manhattan for rich men and for them only. An equally important fact about these residences is that they are more often than not built by speculative builders. It might have been supposed that a man who proposed to pay $100,000 or more for his residence would desire to have plans drawn to suit his particular likes and needs—both æsthetic and practical. It would have seemed impossible to "standardize" such an expensive class of manufactured product, and to put it on the market properly planned to suit the preferences of any one of a score of millionaires. As a matter of fact a very large proportion of these expensive residences have been and are being erected under precisely those conditions by speculative builders. Out of the 90 plans of new residences filed during the first nine months of 1902, for erection either east or west of

ENTRANCE HALLWAY IN THE RESIDENCE OF HENRY SELIGMAN.

Nos. 30-32 West 56th Street, New York City. C. P. H. Gilbert, Architect.



ENTRANCE HALLWAY IN THE RESIDENCE OF HENRY SELIGMAN.
Nos. 30-32 West 56th Street, New York City. C. P. H. Gilbert, Architect.

the Park, or south of Fifty-ninth Street, 67 were the enterprises of firms who were building to resell; and twice within the year, residences that they put upon the market at figures not far from $500,000 have found purchasers—in one case the partner in a large banking house and in another a member of the Gould family.

From the æsthetic point of view, it is undoubtedly an extremely unfortunate fact that so large a share of this exclusive business has fallen into the hands of speculators, for dwellings designed under such conditions must almost necessarily be commonplace or worse; and it speaks ill for the æsthetic education of the average American millionaire that his preferences about his domestic surroundings are so indefinite and impersonal that he will pay a huge price for a house that was designed to suit anybody—who had the money. But this fact, important and unfortunate as it is, should not prevent the recognition of the more important fact that æsthetic considerations, and improved æsthetic standards have been profoundly influential in determining the character of the modern expensive New York residence. Even the speculative builders spare neither money nor pains in the attempt to make the dwellings they put upon the market tempting to fastidious customers; and, if the means which they adopt to this end are frequently grievous and disheartening, the fault is as much their customers as their own. Several of them have even had the courage and good sense to employ the very best architects in the profession—with results that compare favorably to those obtained under less restricted economic conditions. It should be added also that while these builders have placed or are placing more than a hundred of these expensive dwellings on the market, up to the present time a very small proportion of them have been sold—so that what with excessively high prices for land and the large number of unsold dwellings now being offered this branch of the business is likely to be much reduced in 1903.

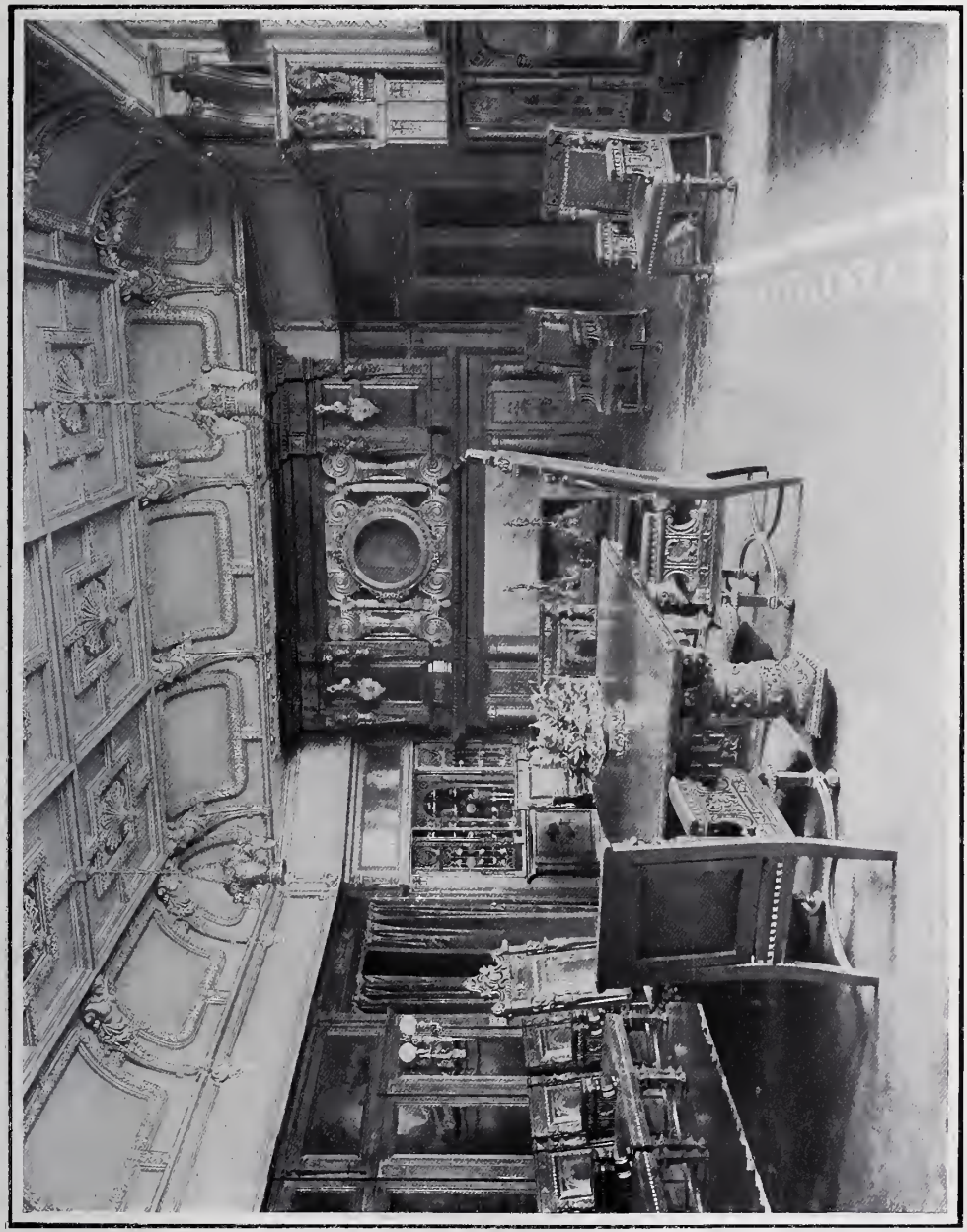
In spite of the activity of the speculative builders, a much larger proportion of rich men than formerly have their houses built from plans prepared by their own architects; and the example of these men has had an extremely important influence in determining and improving current æsthetic standards in the matter of residences. In considering what these standards are we shall ignore dwellings that are wider than twenty-five or thirty feet, because the men who can afford a dwelling erected on a lot as much as or more than 50 feet wide are after all extremely rare, and their houses should be treated in a class by themselves. It is the dwelling built on a 25 foot lot, at a cost (for the building alone) of from $50,000 to $100,000, which has of late years been most radically transformed both in design and plan and the original motive of these changes has been partly æsthetic and partly practical. The most

DRAWING-ROOM IN THE RESIDENCE OF HENRY SELIGMAN.

Nos. 30-32 West 56th Street, New York City. C. P. H. Gilbert, Architect.

DINING-ROOM IN THE RESIDENCE OF HENRY SELIGMAN.

Nos. 30-32 West 56th Street, New York City. C. P. H. Gilbert, Architect.



DINING-ROOM IN THE RESIDENCE OF HENRY SELIGMAN.
Nos. 30-32 West 56th Street, New York City.
C. P. H. Gilbert, Architect.

obvious of them is the revolt against high stoops and brownstone. Even the buyer of comparatively cheap modern residences insists upon an individual design, and the use of brick or some more attractive stone, and among the moderately well-to-do people of good taste, this demand has frequently resulted in the erection of a totally new façade in place of the old brownstone front. The streets on either side of Fifth Avenue in the residence district are gradually being entirely rebuilt with houses, which whatever their variations and occasional aberrations in taste, compare favorably in design with the private dwellings in any modern city. Indeed, one might go further and assert that the best of these houses possess a charm and dignity, which is extremely unusual in modern city architecture, and which provided there were only more of them would bestow upon certain parts of New York a unique distinction. These better houses are generally built of brick, and their designs are more or less unmistakably colonial in character. It is no part of our purpose, however, in this article to attempt any æsthetic valuation of these façades. We merely wish to insist that the desire for distinction and individuality of design has been fundamental in the whole movement we have been describing, and has spread from individual owners to speculative builders.

As to the size of these houses, the tendency has naturally been for them to become both deeper and higher, in proportion as the land became more expensive. The typical early New York residence measured about 25 x 40 and was three stories high. Later the cheap residences were reduced to 20, 18, 15, and in some cases only 13 feet in width, had 10 or 15 feet added to their depth, and tended, although not uniformly, to be four stories high. The more expensive brownstone houses were always four stories high, which, indeed, is as high as a dwelling can conveniently be without the help of an elevator. Recently, however, with the help of the elevator, they have been getting still higher and deeper. A residence erected on expensive land is now rarely less than 60 feet deep, is frequently 70 feet, and on corners often becomes 90 feet. As to the height, a few figures will show their upward tendency. Of the plans filed for dwellings during the first nine months of 1902, to be situated east and south of Central Park, 12 were four stories high, 33 contained five stories, 2 five and one-half stories, 14 six stories, and one seven stories. Consider well what kind of a building a seven-story residence must be! Such a building would need two elevators, one for the servants and one for the family, and the distances would be so great that it could not well do without an internal telephone system. Consider the hot water supply needed to serve the dozen bathrooms that such a building would contain and the machinery required for its elevators, heating sys-

LIBRARY IN THE RESIDENCE OF HENRY SELIGMAN.
Nos. 30-32 West 56th Street, New York City.
C. P. H. Gilbert, Architect.

tem and the like. The modern expensive residence tends to become almost as complicated a piece of machinery as a modern hotel.

In regard to the plan of these houses, the great problems are to secure a good entrance to a house that is 2½ or 3 times as deep as it is wide, and, when situated on the interior of a block, proper lighting for the middle rooms. The difficulty of this second problem is increased by the height of the buildings, which prevents the architect from depending on a skylight except for the upper stories. The difficulty is met sometimes by the use of a narrow exterior court, which supplies air if not much light, sometimes by a larger court, which, however, serves only the back half of the building, and sometimes by making the building shallower, as it becomes taller, so that the two or three lower stories are in the nature of extensions. But in spite of such expedients these dwellings, except when they are situated on corners, are rarely very well lighted. For, occupying as they do a large proportion of the lot and having at their back buildings that occupy an equally large proportion, none of the lower rooms except those situated in front get their light from a source better than a court. New York is fast becoming a city in which even wealth, unless it is very great wealth, finds it difficult to buy thoroughly well-lighted rooms.

A satisfactory entrance, leading to the important rooms of the house without inconvenience or waste of space, has proved to be an almost equally difficult problem. All the designers, even those of comparatively cheap dwellings on the West Side, have, indeed, agreed to discard the old stoop. The entrance is invariably situated on the ground floor. Below this floor is a basement, which is reached, of course, by a separate street door. The basement generally contains the kitchen, the servants' hall, the laundry and various storage and machinery rooms, but sometimes the machinery disappears into the cellar under the basement, and sometimes in the smaller houses the kitchen and servants' hall are placed on the ground floor. When the kitchen is in the basement, the back half of the ground floor is given over to the dining-room, and the disposition of the entrance hall depends largely upon the use to which the rest of that floor is put. This stair hall always occupies the full width of the house; but, however spacious, it is necessarily a room which obtains the very worst light of all. From the hall a somewhat imposing staircase, as well as a small electric elevator, lead to the upper stories of the building.

When the dining-room is located on the ground floor, the second floor is given over to the drawing-room and the library, or in the other case to the dining-room and the drawing-room. These two rooms occupy the full width of the house back and front, but taken together they cannot well include the whole depth of the

SMOKING-ROOM IN THE RESIDENCE OF HENRY SELIGMAN.
Nos. 30-32 West 56th Street, New York City. C. P. H. Gilbert, Architect.

house for in that case the rooms front and back would be ill-shaped. There is always a space of twenty or thirty feet between the two rooms, which is badly lighted and is in some measure wasted.

Above the second floor will be found the bedrooms. A house 25 or 30 feet wide will include about six bedrooms for the use of the family and guests, and about eight servants' bedrooms. These rooms will be served by some six or seven bathrooms. The largest rooms on the third floor will occupy the whole frontage of the house and will have dressing-rooms and tubs connected with them. The fourth floor is sometimes divided into only three rooms, and sometimes into five. Still higher up come the servants' quarters, and perhaps one other family bedroom. Of course, if the house is six stories high the number of sleeping apartments is correspondingly enlarged. These upper rooms are naturally better lighted than those below.

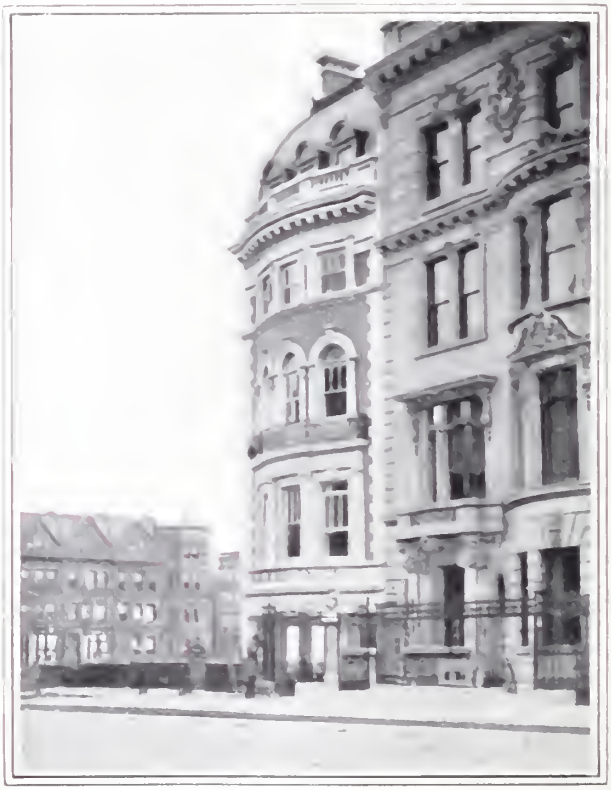
The interior decoration of these expensive residences varies to a much greater extent than do either the plans or designs. An American, particularly American women, are much more interested in the interior of their dwelling than they are in its exterior; and the improved standards of taste, which are so noticeable on the outside are still more remarkable within. But, obviously, this is an aspect of the expensive dwelling about which very few general statements can be made. Even the speculative builders make allowance for individuality of taste in such matters by having the drawing-room, dining-room and library undecorated, until a purchaser is found and his wife consulted. It may, however, be said, in general, that current taste is at present running strongly in the direction of the use of definite French and Italian styles, and the use wherever possible, of old furniture and tapestries. The extent of this business may be inferred from the number of interior decorators on Fifth Avenue, who are interested only in the most expensive class of work, and whose agents are scouring Europe, not only for old fabrics and wood work, but for columns, mantel pieces, floors, ceilings and what not. This whole business of interior decoration is obviously, however, in a much more transitional state even than that of exterior design; and it is to be hoped in the end some specific forms, adapted to local conditions, will be evolved out of the present chaos of borrowing and imitation. Some more original designing will eventually become a commercial necessity, because, before many years are out, Europe will have parted with all its relics of domestic life, which she does not want herself, and the American designers will have to set up in business for themselves.

Such are a few of the conditions under which the contemporary metropolitan residence is manufactured and such are a few of the

A TYPE OF RESIDENCE RECENTLY ERECTED IN LONDON.

obvious characteristics of the manufactured product. Most of these conditions and characteristics are prescribed by inexorable business conditions, which only a Carnegie can afford to ignore; and taking altogether they describe a building movement, which it is safe to say is entirely unprecedented. It is probable that the beginning of the end has already been reached in this particular line of activity, but when the next period of prosperity comes, it will be doubtless resumed with results that are even more extraordinary.

Herbert Croly.



RESIDENCE NEAR 5TH AVENUE, NEW YORK CITY.

THE CAMPANILE OF ST. MARK'S AT VENICE.

An Authentic Account of the Circumstances That Led to Its Fall.

THE construction of the Campanile of St. Mark's at Venice, which was built between the tenth and twelfth centuries, was influenced by the crude methods of that period. The walls were composed of large bricks of unequal size, which were obtained by the destruction of ancient monuments. The visible surfaces of the walls were composed of bricks which were laid in fairly regular fashion; but, in the interior of the walls, the bricks were placed irregularly and bound with inferior mortar.

This fact was established by the downfall in which the edifice subsided into a mound of small fragments, from which rose a gigantic cloud of dust.

The tower had undergone repairs on several occasions, in the course of centuries; but these, for the most part, had been limited to the bell room, whose final form was of the style of the Renaissance. According to the information obtained from chronicles, it appears that the body of the tower never had had more than partial repairs before the eighteenth century. It had, however, been stuccoed in color, in imitation of brick, which covering was, in recent years, only visible in spots.

It was about the middle of the century in question, and exactly in 1745, that serious fissures had been caused by lightning, on the side above the Loggetta of Sansovino, and that this side had to be repaired completely.

The work was carried out under the direction of the celebrated Bernadino Zendrini, the engineer of the Republic, and cost 6,800 ducats, a very considerable sum for those times. This restoration, it should be carefully noted, consisted of an exterior wall of brick masonry similar to that used in our own time, laid with a mortar of lime and pozzolana in such fashion that this side of the tower presented a very modern appearance. However, inasmuch as the bricks of the new exterior wall could not be fastened to the older ones of the inner (ancient) wall, large square blocks of stone were set in, to unite the two. The white exterior surfaces of these were visible, scattered over the surface of the wall and set in its angles.

This outer masonry had remained in good condition until 1898, and then only had need of some slight repairs in the upper portion, which were called for by unimportant fissures, which did not af-

fect the general stability of the tower. Thus the Campanile of St. Mark's might have stood for many centuries, if the hand of man had not intervened to cause its ruin.

* * * * * *

In the month of last June the Ufficio Regionale for the preservation of the monuments in Venetian territory, which had charge of the repairs of the Loggetta, undertook to replace the lead covering of the roof of this little monument.*

Since the Loggetta was built against the side of the tower, the roof leaned upon its wall, and at the line of union there was built into this wall a projecting and sloping coping, which kept the rain from entering the joint between the leaden covering and the surface of the wall.

Those who were directing this work, being under the necessity of renewing the leaden plates, had the unfortunate idea to remove the projecting coping, with the intention of replacing it immediately, and in order to do this they cut into the wall of the Campanile horizontally for more than two-thirds of its breadth. In this manner they seriously weakened the base of the outer wall, which had been built by Zendrini, as above explained. It must be remarked that at this height the outer wall was thinner than above, because a much more considerable thickness had been given to the outer wall above—that is to say, at the points where the lightning had caused the largest fissures in the old wall—whereas, a thinner wall had served the purpose lower down. But this was also the portion subjected to the greatest strain, as having to support, to a large extent, the whole weight of the upper wall.

To give the last touch to this misfortune, it happened that in cutting through the outer wall the inner one was injured at certain points and this cutting caused the downfall of a considerable amount of debris, thus making a hollow space within, reaching upward, which could not be filled in.

In this fashion, either as a result of the horizontal cutting, which was left open for several days, or as a result of the cavity which had been caused in the interior of the wall, the outer wall of 1745 was thrown out of plumb and perceptible movements began to show themselves in the interior of the tower.

During this time the engineer, Saccardo, architect in charge of the Basilica of St. Mark's, was ill and no one had mentioned to him that the work was going on. Notwithstanding this, as soon as the Ufficio Regionale invited him to visit the tower on Thursday, the 10th of July, he did so, in spite of his illness, but he immediately perceived that any attempt at repair would be useless;

*Under the direction of its Associated Architect, Signor Domenico Rupolo.

and that the only thing that could be hoped for, was that when the cutting had been filled in, the outer wall might regain its stability.

It must, however, be remarked that, although the architect of the Basilica had been advised of the cutting into of the exterior wall, he had not been told of the interior cavity, so that his hopes were justified, as far as his knowledge went.

It is also important to notice that, up to the given date, no obvious signs of danger had appeared in the exterior walls. It was not until Sunday, the 13th of July, that fissures began to appear at the northeast corner of the tower, of such a menacing character, that the architect, Saccardo, although still ill, was obliged to make immediate arrangements, of thorough-going character, for the public safety. In fact, on the following Monday, at five minutes before ten o'clock in the morning the Campanile fell.

In the manner of this fall evidence was given that the immediate and only cause of the catastrophe was the cutting into the outer wall of 1745, and the damage caused in the ancient interior masonry by this cutting, for the collapse began with the total downfall of the aforesaid outer wall, which preceded by several seconds the complete ruin of the monument.

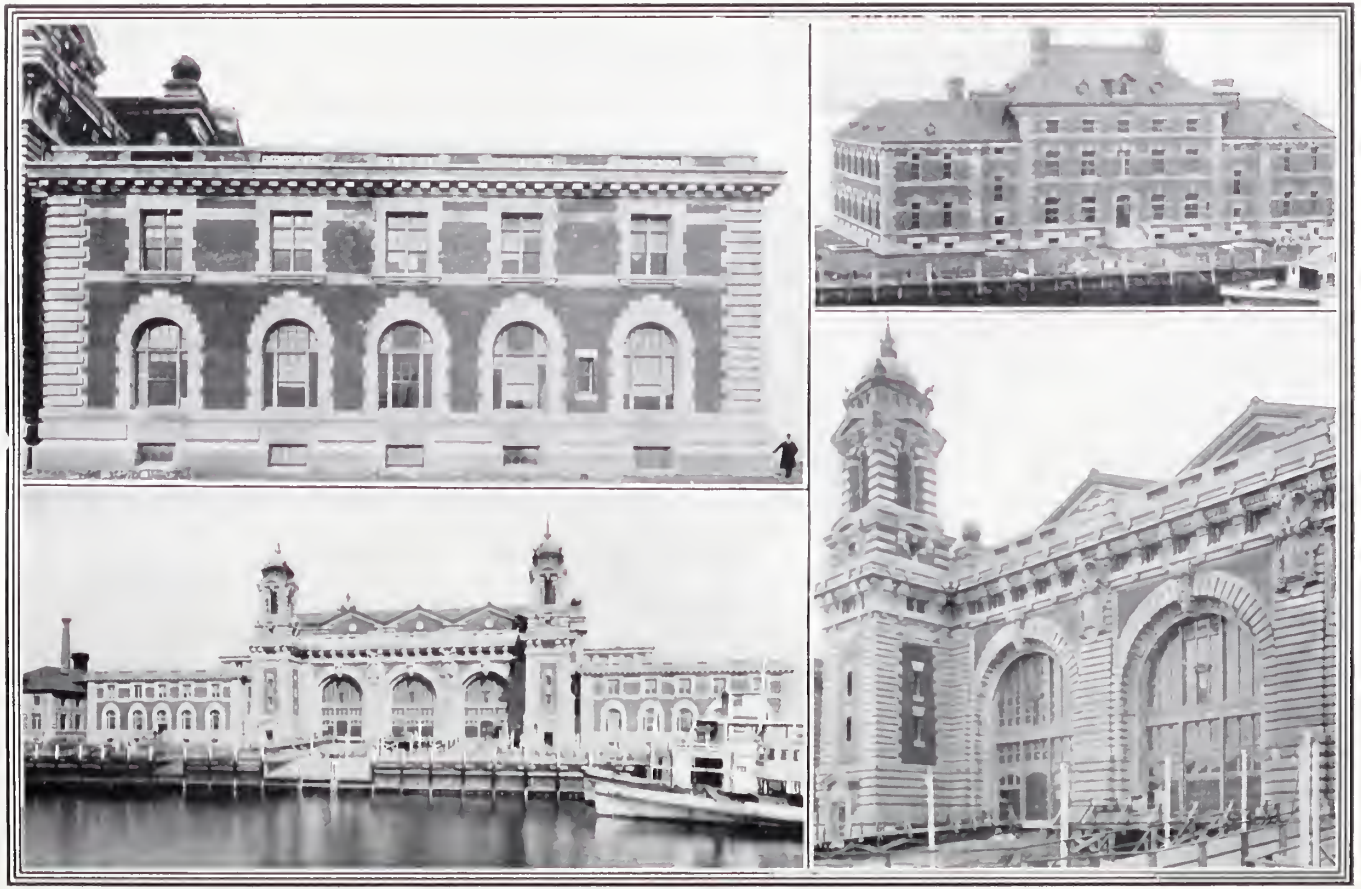
* * * * * *

We may thank Providence that we have not had to lament the sacrifice of any human victim, and that the Basilica of St. Mark's, although only a few metres distant from the Campanile, was not injured at any point by its ruin. It must be added, however, that there was a victim, and this victim was Signor Pietro Saccardo, architect of the Basilica, who having labored in years past to repair the Campanile, had had the pain of seeing his undertaking interrupted by the plots of envious adversaries. On this last occasion, he was removed from office with enormous injustice, even though temporarily; in spite of the patent evidence of his complete innocence and without regard to his age, to his forty years of service, and to his infirm health; while the real culprit of the catastrophy still tranquilly retains his position. *Cherchez la femme—La Politique.*

An investigation is, however, pending, through which one may hope that justice will be done, if there is still an atom of justice to be had in this world. And if, against all evidence, that justice should not be done, it is not only the architect, Saccardo, who will have been injured, but also his host of friends, who within a few months had presented him a gold medal for his services to the Basilica of St. Mark's.

Pietro Saccardo.

Formerly Architect in charge of the Basilica of St. Mark's.



THE IMMIGRANT STATION ON ELLIS ISLAND, NEW YORK HARBOR.

Boring & Tilton, Architects.

ARCHITECTURAL APPRECIATIONS.—NO. III.

The New York Immigrant Station.

THE new Immigrant Station on Ellis Island, in the Upper Bay of New York, has only lately been so far completed that it can be fairly judged from all points of view, practical and æsthetic. It is a pregnant text, carrying morals and "uses" of several kinds. One of them is, what a huge town New York is coming to be, when a building or group of buildings of so much architectural pretension and interest, and of a cost of a million and a half, which a generation ago would have been at least a nine days' wonder, should now go to completion without attracting any attention beyond the languid glances of voyagers up or down the bay, and the bovine stare of the dazed immigrant for whose uses it is built. A larger moral is, what a huge country this is getting to be, when what is really but a wicket or turnstile, whereby the incomers may be counted and sorted, is, by the actual requirements of its being, expanded to such proportions as these, and what a great thing it is, not only for America, but for humanity, that there should be so vast an asylum, or rather arena, opened for the crowded-out, the "residuum," of other lands. It is just the reverse of Dante's famous line:

Lasciate ogni speranza chi voi entrate

that should surmount this triple portal. Napoleon's motto would be better: "La carrière ouverte aux talents," and even better still Lowell's lines:

She of the open soul and open door,
With room about her hearth for all mankind.

In one sense these are not architectural considerations, but in a deeper sense they are. It is an æsthetic requirement that this lavish hospitality and world-wide welcome should be expressed, and expressed in the architecture, since the accessory expression of sculpture are not admissible here. That is in fact provided hard by, on Liberty Island, by Bartholdi's Colossa, which surely offers a more dignified welcome to New York than was offered to Paris in 1900 by that astonishing, dressed, not draped, Parisienne who surmounted the equally astonishing arched tripod in metal, and got that erection promptly dubbed "The Dinner Bell," by reason of her own resemblance to the handle. What a pity that the statue and the immigrant station could not have been undertaken at the same time and as parts of the same group, which the torch bearer might in that case so effectively have dominated!

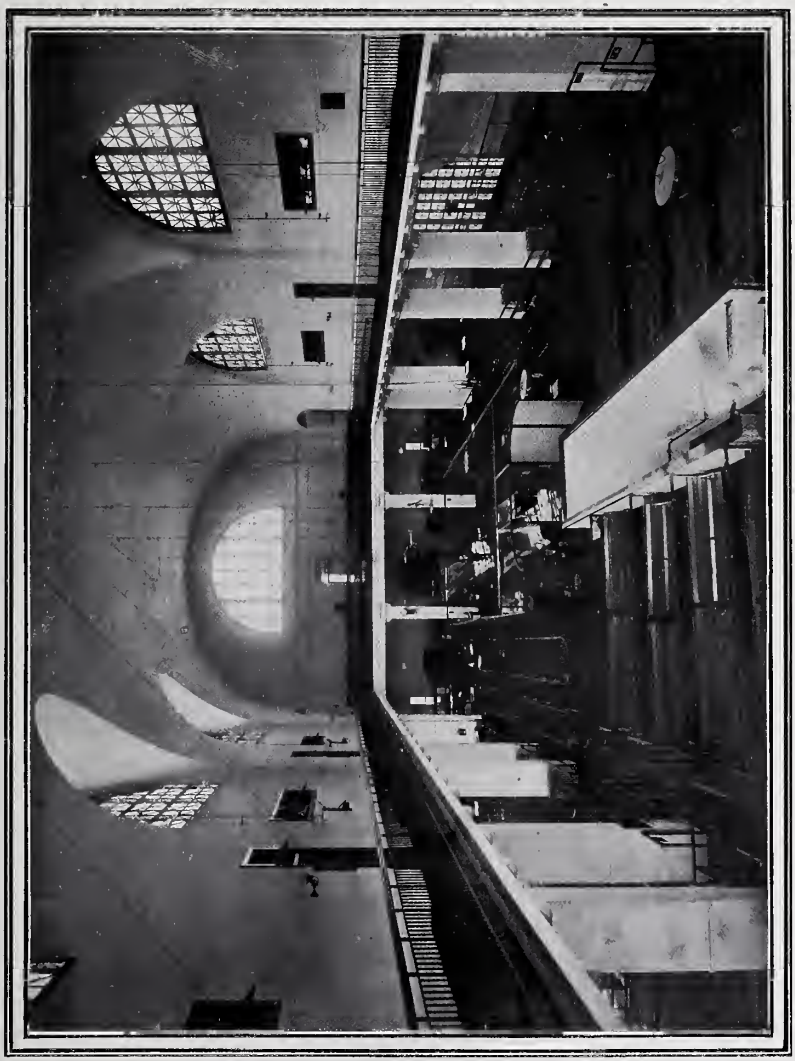
The most obvious of the strictly architectural morals the new buildings suggest is one that has been labored in these columns before, but it can scarcely be labored too often or too strenuously, now that it has become so much the fashion in "technical" circles to represent that the architect is disappearing before the march of engineering science, or becoming, at most, a decorator to be invoked after the technical man has done the real work of construction. The technical persons who take this curious view enumerate the various functions of the technical men of different kinds who have to do with the structure or the "installations" of "a modern building," and think they have proved something going to show the obsolescence of the architect, and the coming of the engineer to supplant him. As a matter of fact, they have proved nothing at all to that purpose. The author of a building, whatever you may choose to call him, is the man who has learned how to apportion its spaces so as to secure the best results, practically in the points of convenience and accommodation, architecturally in the points of expression, dignity, beauty. According to some investigators, the Roman engineer was in this sense the real author of the Greco-Roman monuments, of the great baths, palaces and amphitheatres—of all the Imperial buildings, in fact, except the temples, which were based on the Greek traditions, and the Greek decorator performed the function to which these ultra-modern technical analysis would relegate the architect. It may be quite as the investigators we have quoted say about the Roman monuments. It is certain enough that the system of construction of those monuments was one thing and the systems of decoration another, much to the architectural detriment of the result; and that in the most characteristic productions of the Roman genius, not only were the two not reconciled, but no attempt was made to reconcile them. But it is true also that whoever planned those buildings knew his business, that he had been trained in the art of considering requirements from every point of view and of apportioning his spaces accordingly. That is to say that he had the fundamentals of the architectural equipment. Such a man was then entitled and is still entitled to call himself an architect. It would be greatly to the advantage of his building if he himself were able to decorate the construction he designed, as the example of these very Roman monuments shows in showing the painful and incongruous results of his lack of that ability. But he might have employed his decorator, as he might have even now employ him, just as he might employ his steam fitter or his electrical engineer or his expert in foundations, without in the least compromising his claim to the real authorship of the work. He has attained the architectonic faculty. It is evident in every characteristic attempt at architecture of the modern

engineer, who is only an engineer, that he has never learned these rudiments of the architect's business. His defect in architectural training is seen even more in the crudity of his planning than in the crudity of what it may please him to regard as his decorative additions. It is always the author of what in Paris is called the "parti," and in New York the "lay out," who is the real author, the real architect of the building. This essential of architecture was expressed by an American architect, who had prepared competitive drawings for an important public building, of which the cautious owners had undertaken to protect themselves from being sacrificed to the honor and glory of their architect by imposing a ground plan upon the competitors, a ground plan which did, after a fashion, embrace their requirements, but which showed the hopelessly inorganic character that belongs to the planning of the amateur, including the engineer. To a friend asking him whether the orderly and logical ground plan he showed comprehended all that was prescribed in the graphical inventory, the designer made answer: "Everything. I have only 'architected' it." It especially behooves one who by no means completely admires the architectural expression which the ordinary output of the Ecoles des Beaux Arts takes, even for its native soil of France, and who falls much further short of completely admiring it when it is transplanted bodily to our soil, all the more freely to acknowledge that the training of that famous school does confer upon its pupils the power of apportioning their spaces and handling their masses, of laying out their buildings, which is the fundamental element of the architectural equipment.

This immigrant station is a case very much in point. It is a problem quite without precedent. The closest analogue to it, in familiar buildings, is doubtless the railway station, although "Les Concours Publiques," in reproducing the competitive drawings, classified the work under "Hospices et Hospitaux," with which also it has some affinity, although the analogy to these is much fainter than to the railway station. The scheme comprises, indeed, both a "hospice" and a hospital, but the requirement which characterizes its main and central feature is the same as that of a railway station, the requirement of "landing," collecting and distributing great and sudden crowds with a minimum of confusion or delay. Every unit of the incoming multitudes must receive so much individual attention as to make sure whether or not it calls for detention, and, if not, to make sure that it is guided unmistakably in the direction of its destination. The primary problem is one of "circulation," like that of the railway station, only even more urgent. It was to the solution of that problem that the designer addressed himself. Instead of the rectangle, with four outlying rectangles at the angles,

and consequently with four junctures threatening so many points of engorgement, which was adopted by most of his competitors, the successful competitor provided for an uninterrupted circulation for a continuous human flow, distributed according to the respective destinations of its constituent drops, but not subject anywhere to stoppage or congestion. The dispositions by which this result has been attained may be seen by a comparison of the ground plan, with the view of the completed interior. They are so successful that, in the new examination hall, the astonishing record has been made of 6,500 immigrants, each one of whom received some individual attention, entered, passed and "cleared" in nine hours.

The apartment in which this clearance takes place is necessarily the chief and central object of design. It is a "waiting room" on a scale almost, if not quite, without precedent, and it requires to be emphasized as such. Upon the whole this emphasis is judiciously and discretely applied. It is to be borne in mind, however, that the waiting room occupies the upper part only of the central construction, the lower being given over to subsidiary uses, and one would like to see some more explicit expression of that fact than the metal transom that marks the floor line. To have continued this line across the enclosing and intermediate piers would have had the effect of cutting the great openings in two vertically, and was so out of the question. And, indeed, much more emphasis than is now given to the division would have confused the whole arrangement of piers and arches and enclosing pavilions, which we agree with the designer in thinking of a more valuable and also of a more logical effect. But would it have been impracticable to emphasize the transom by advancing it, with the panels underneath, so as to form a real feature of separation, as is so often effectively done with galleried churches, without compromising at all the importance and scarcely the unity of the single great opening? However, that may be, the general composition of this central building, the distribution of its masses and the treatment of them, strikes us as thoroughly admirable. The piers between the arches are duly massive, and their massiveness is accentuated by the treatment of their masonry, while the flanking and projecting belfried pavilions are extremely effective. Observe the unusual breadth and massiveness of the quoining, and especially, what is much more observable in the fact than in the photograph, the effectiveness of the pronounced "batter" of the walls of the towered pavilions. The great arches of the clerestory, withdrawn behind the balustrade, not only have their practical uses for the illumination of the interior, but the low gables that surmount them their architectural uses on the exterior in relieving and animating the



INTERIOR OF THE IMMIGRANT STATION ON ELLIS ISLAND.
Boring & Tilton, Architects.

sky line without disturbing it. The employment of color in these towers, and, indeed, throughout the central mass, is admirable and exemplary, the manner in which the light limestone and the red brick are used together, from the monochromatic masonry of the base up to the equal striping of the belvideres. The contrast is even carried into the cornice, in which the red brick is introduced into the uprights with excellent effect. It is always to be borne in mind that nine-tenths and more of the spectators of this building see it from a distance only, and so that the effectiveness of a "distant prospect" is more important than that of a nearer view. For the distant view, the collocation and contrast of color the architect has employed are particularly well adapted, as is indeed the general disposition. The immigrant or tourist or returning voyager can scarcely fail to apprehend, from the Narrows, or from any point of view from which he can see the group at all, the huge arches and their flanking towers, or their bichromatic material. Nor do the concessions made to him do any harm in a nearer view. It is different, however, with the scale of the detail. It is so inflated and the fronts so "scaled up" for the benefit of the distant spectator that, close at hand, the detail undoubtedly takes on a forced and almost a bloated aspect. You cannot have everything.

The character of the detail is scarcely worthy of the real nobility of the general composition. It is an old complaint of architecture as it is studied and practiced at the Beaux Arts, that it does not know the use of mouldings. One recognizes, of course, that the architect had to deny himself, from economical considerations, the use of much carved enrichment. The employment of color, and the emphatic dressing of the stone work are substitutes for this source of effect, and by no means ineffectual substitutes. But still one cannot help perceiving that the mere concave quadrant, which is the only modification of the arches, is far less effective than many other modes of treatment would have been, e. g., than the familiar torus with a hollow on each side: and the mask which at the apex, which alone interrupts the quadrant, gives an unpleasant impression of trying to carry the keystone all by itself, and of being overweighted in the attempt. The shield and eagle which surmount each of the intermediate piers constitute a well-conceived feature of symbolism. But the eagle somehow recalls Sheridan's remark about the poet who overworked the inevitable phoenix in his address for the reopening of Drury Lane: "It was a poulterer's description of a phoenix," so "chesty" is the bird that offers his breast to the finger of the customer. It is, in fact, the Pyrenean and Gallic eagle, and not the bald-headed bird of the Appalachian Chain, that the effigy recalls, and one instinctively looks under it for the "R. F.," which would denote its true nationality so much better than

the shield of the United States which it in fact surmounts. The frieze and cornice and attic are extremely well studied in their general relation, but obviously they, too, would be the better for more of curvature and elaboration in the detail to soften the harshness of their rectilinearity. But these things are mere blemishes upon a capital piece of work.

One must pay a passing tribute, also, to the subordinate buildings, including the Administrative offices, which form one wing of the principal building, the prison and offices which form the other and the outlying hospital and power house. With regard to the wings one might wish that they had been more closely allied to the centre, and an obvious means of effecting this alliance seems to have offered itself in the prolongation of the projecting upper course of the stone basement of the towers as the springing course of the arches of the wings, which would in themselves have been bettered by the expression of that important line. But the general treatment of these wings none the less results in an expression which is quite what it ought to be—quite what "it must be," as the French put it better—in its union of plainness and dignity. And the same praise may be bestowed, in an even higher degree, upon the hospital, which is as plain as a charity hospital ought to be, and the power house, which is as plain as a power house ought to be, but both which, partly in virtue of their very simplicity, have the fitness, which is really as well as etymologically the "dignity," that should attach to their ownership. The new immigrant station is a very distinct architectural success. The immigrant who gets his first notion of the New World from it will not get an unfair one, and the architects and our Uncle, their client, are alike to be congratulated.

DINING ROOM DECORATED WITH TILES.

Richard—Ginori, Milan. M. Buffa, Designer.

IRON FENDER.

A. Mazzucotelli, Designer.

L'ART NOUVEAU AT TURIN.

A Description of the Exhibition by A. Melani, a Member of the International Jury.

II.

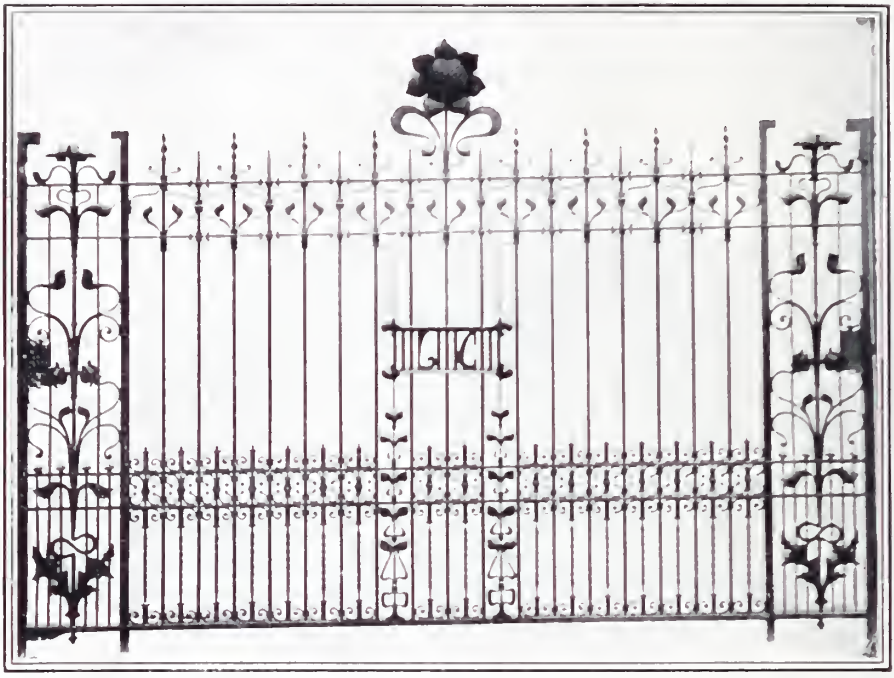
FROM the architectural point of view, M. A. Mazzucotelli, of Milan, is of peculiar interest. In the entire exposition perhaps, it is he who exhibits the finest and most original work in wrought iron. I have, therefore, thought it advisable to send you a certain number of photographs, so that your readers may appreciate with their own eyes the elegance and suppleness of his designs. We have not to do here merely with a manufacturer who handles iron like a laborer; we have before us a genuine artist, who composes, designs, works on his material like a simple blacksmith. The work of M. Mazzucotelli has received a solemn consecration at the Turin International Exposition in the shape of the highest award, the Diploma of Honor. This is not as yet official, but I, who was on the International Jury, can write this to you, being sure not to commit any indiscretion for the news will be known by the time that these pages are published.

Italy has also asserted herself admirably through the products of "L'Arte della Ceramica." At the Turin International Exposition La Ceramica has made a supreme effort; and its success is entire and uncontested. The soul of La Ceramica is M. Giustiniani; he is its director, its instigator, its manager. Its artist is a youth, M. Galileo Chini, who was at first a painter and then took up ceramics with an enthusiasm that reminds one of the best times of our national art.

M. Chini is a searcher after new forms and one of the most un-

relenting enemies of art at second hand. This is rather curious for a Florentine. Florence, where our artist has spent all of his life, is the home of tradition. The peerless beauty of the work within the wall of the Italian Athens is not suited to instigate modern artists to a reform of style, and so it is that the New Art finds at Florence its strongest opponents; this gives that strange character to our M. Chini that who in surroundings like Florence could isolate himself and devote his work to the New Art.

Italian ceramics has found other remarkable representatives at the International Exposition; but from the point of view of modern



IRON GATE.

A. Mazzucotelli, Designer.

art, La Ceramica is ahead of the other manufactories. Among the photographs which I have been able to obtain, those of the Richard-Ginori factory will show you the work of an exhibitor who deserves consideration. This is the strongest manufactory of ceramics in Italy. It employs a very respectable capital, and is made up of two manufactories, that of Richard, of Milan, and that of Ginori, of Doccia (near Florence). The Richard manufactory has traditions which are almost entirely industrial, whereas that of Ginori on the contrary, besides manufacturing for the trade, has always produced works of art, but in an archaic taste. The Richard-Ginori manu-

factory was therefore, not in a condition very favorable to the productions of the New Art. However that be, it made in competition with the other Italian artists, the design for a dining-room, executed this room after the model of M. Buffa, executed likewise a bathroom, and its exhibit, rich also in vases, plate, etc., may be visited with interest.

Among the Italian exhibitors, M. Beltrami also attracts the eyes of the visitors with his glass windows. M. Beltrami, in company with Messrs, Buffa, Cantinotti and Zuccaro, opened recently a studio for industrial art, and his glass windows show a very decided modern character, and make therefore at Turin an excellent impression. The eyes of the public are likewise attracted by an

VASES.
By Arte della Ceramica, Florence.

American exhibitor, Mr. Cutler, who has his studio at Florence; having combined with a Florentine artist, M. C. Girard, manufacturer of carved and inlaid furniture, both take one of the leading places at the International Exposition. Treated with the most conscientious talent and with an extreme care, the Cutler-Girard furniture has now and then a somewhat odd character; but its closer examination justifies the interest which it aroused in the visitors.

Austria is represented at the Exhibition with a certain ampleness, which, however, is left far behind the comprehensiveness and variety of the German exhibit. As far as space and number of exhibitors are concerned Germany comes very close to Italy.

England occupies a very remarkable place at the International Exposition, for, several artists are represented there with impor-

SMALL WOODEN CLOSET WITH METALLIC DECORATIONS.

By C. Girard, Florence. Designer, Marshall Cutler.

tant work, beginning with Walter Crane, who has set up an exposition of his own. The exposition of the English at Turin has the pregnant characteristic of being a collection of "incunabulæ" of the New Art, and has been conceived so as to give it that character, which is of great importance even to the general public.

Walter Crane has brought from London paintings, drawings, pottery, wall tapestry, studies of flowers, sketches, aquarelles, models in plaster, books, and all this extraordinary work reflects the power of this modest man, who loves the success of his fellow artists like his own success.

By the side of Walter Crane, and under the supervision of this Master, we have at Turin a pretty complete exposition of the Arts and Crafts Society, of London; vases in faïence, reliefs in plaster, furniture, drawings for glass windows, lamps, copperware, embroidery, fabrics, architectural designs, bookbindings and jewelry. By the side of Walter Crane's name, we find the celebrated names of W. Morris, Ford Madox Brown, E. Burne Jones, and further, the remarkable names of Ashbee, Townsend, Voysey, Day, etc. I shall not speak at length of the contribution made by the Guild of Handicraft, of London, wrought iron work, engravings, furniture, all this in a modest way, but sufficient to give an idea of what the renewal of the decorative arts amounts to in England; as I said above, it has almost remained at its starting point.

One cannot say as much, so far as Scotland is concerned; it forms one of the successes of the International Exposition and represents what is most spiritual and most characteristic at Turin. To commence with its installation, this is due to the work of the architect Mackintosh. The Scottish section is that which is visited the least by the general public; but it is that which is esteemed and admired the most by connoisseurs. The artists who lead there are Mr. and Mrs. Mackintosh and Miss King, the former with furniture, panels in plaster, in metal, etc., the latter with pen designs and book bindings. Nor can I forget the enamelling by Mr. Day, the furniture by Mr. Taylor, the embroidery by Mrs. Newberry, Macbeth, Keyden, and the contributions of Mr. and Mrs. MacNair; I call your attention to the great activity shown by women, married and single, in this Scotch section, which represents wonderfully well the ideas and efforts of the Glasgow school.

For me, those who are head above all exhibitors, are Mr. and Mrs. Mackintosh. They have composed with their furniture, their panels, their embroidery, their lamps, a pretty room, a "boudoir rose," which is the most charming thing at the International Exposition. The general public will not, can not even, understand it. Some artists, even make reservations. I am sorry to send you merely a photograph of this "boudoir rose," and a very poor pho-

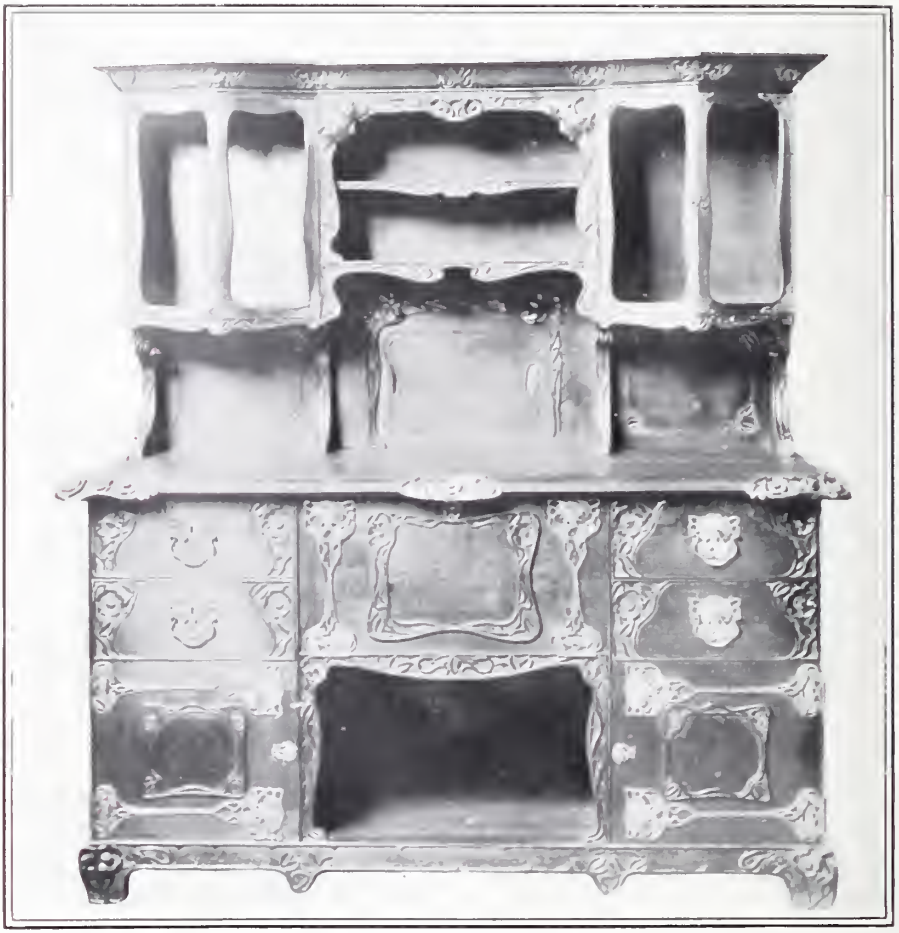
tograph at that; but even if it were perfect, it could not make you feel the poetry of sentiment and of coloring which is hidden in this ensemble. I want to add here that the boldest note, from the point of view of decorative painting and sculpture has been sounded, at the International Exposition, by the Mackintoshes, especially by Mrs. Mackintosh, who has some exquisite panels, extraordinary images of so personal a character that the general public and some timid artists lose their bearings the moment they set eyes on them. In short, I should have to write a special article on the Scottish section, even on the designs and bindings of Miss King, an eminent suggestive artist; there I might set out properly the simplicity of the Scotch furniture and their distinction, the beauty and the calmness pervading this entire section; it is considered sterile, whereas it is wonderfully alive with sentiment and with finesse.

The most marked contrast to this section is formed by the German section, overloaded and excessively rich. As at Paris in 1900, so at Turin in 1902, Germany wished to display its prosperity as well as its arts. There are, in all, 38 rooms, arranged, furnished, decorated, the whole constructed after the plans of De Berlepsch. Every room, large or small, is reserved to one of the German states, Prussia, Saxony, Bavaria, Baden, Würtemberg, Hesse and Hamburg and every one has a particular character, from the vestibule, half Gothic, by P. Behrens, architect, to the hall of Emperor William, by H. Billing, architect. But one must not expect to find anywhere, in this pompous installation, the purest taste and the most modern manner. In some places, on the contrary, one has reason to be surprised at the contrast between the purposes of the Exposition and those of the German decorator. This contrast is positively striking in a small chapel surmounted by a cupola which is decorated in a manner altogether Byzantine, the work of B. Lüer. Germany's particular success is Olbrich, the recognized leader of that young and celebrated school of artists at Darmstadt, the "Künster-Kolonie," which has already achieved such brilliant results. Olbrich, an architect and decorator, exquisite in the decoration of interiors, presents to us three rooms, a reading room in grey with a white bow-window, a dining-room in yellow, and a sleeping room in white, three pieces of admirable distinction.

Our artist has the sense for the simple: he appears to us Italians a little rigid and geometrical, even a little cold, but that is his personality and it commences already to win followers, in Germany and . . . in Italy, where M. Cometti, a distinguished exhibitor, is beginning to become "Olbrichesque." However that may be, after seeing the rooms of Mr. Olbrich, it is difficult to find in the Exposition an ensemble, which in every point can be compared to

THE "BOUDOIR ROSE."

Mr. and Mrs. Mackintosh, Designers.



WOODEN BUFFET.

By C. Girard, Florence. Marshall Cutler, Designer.

it. The stamp of originality is by no means so profoundly impressed as upon the "boudoir rose" of Mr. and Mrs. Mackintosh, and even M. Bugatti, of Milan, has a more personal tone, but the rooms of Olbrich have an aspect which seduces by its equilibrium, although they are less exquisite, especially from the point of view of the coloring, than the Scottish boudoir and less capricious than the creations of M. Bugatti.

In the German section there should also be seen a dining-room by P. Behrens, in red with inlaid work in glass—an ensemble which reminds one a little of Olbrich, but is very conscientiously composed, this room must therefore be placed in the first line among the dining-rooms, like a dining-room by Portoris and Fix, of Vienna. Rooms furnished by B. Pankok, of Stuttgart, and by B. Paul, of Munich, should also be mentioned here among the most remarkable pieces of the German section; the latter makes further impression with a large room covered with majolicas, architecture by Kreis of Dresden, of doubtful taste. I do not say much of the art ware, books, bindings, panels, board bills, lamps, silverware, artistic bronzes, faïences, designs, embroidery, otherwise I should have to take up the whole present issue with my article. Germany, as I told you at the beginning has been represented in a complete manner. They have even exhibited "Jugend" and "Simplicissimuss" at Turin, and it is no more than just to acknowledge that their section has made the greatest impression.

France, on the contrary, although in the field of the New Art she can show some very remarkable artists and can boast of successes of the first order, is far from exciting the curiosity of the intelligent visitors at our International Exposition. The reason is that she has sent things already known, and her exposition has evidently been improvised. We have Lalique, Charpentier, Bigot, Rodin, Majorelle, De Feure, Colonna, Sauvage, but these artists have given their help indirectly, through the medium of two well-known Paris establishments, "L'Art Nouveau Bing," and "La Maison Moderne (J. Mejer Graefe)." There is also an independent section, but it is not over-interesting. We find there, however, stoneware by Boisonnet and artistic fabrics by Fridrich. It would be no use to tell you of the success of the jewelry of Lalique; but I do want to call your attention to a superb statue by Rodin, intended for the decoration of a door, an admirable piece of sculpture, something that reminds one of Michel Angelo, of the slaves on the tomb of Julius II., without being a copy or an imitation of Michel Angelo's art. Well worthy of consideration are the things sent by Charpentier, a series of plates of a weird nature and striking character; Charpentier exhibits also some furniture for music, with metal reliefs, of a somewhat heavy aspect

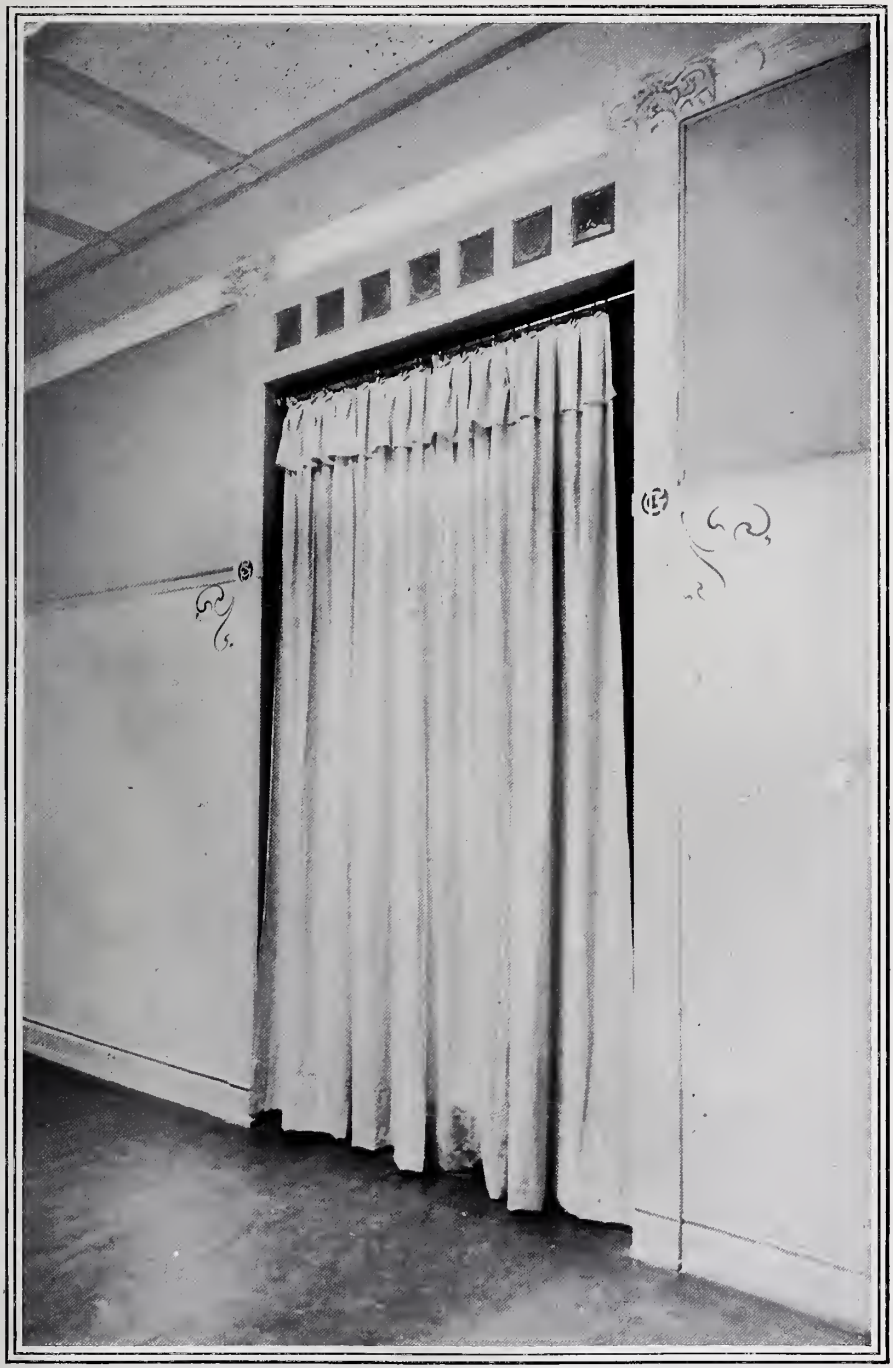
and considerable price ($500). Among the furniture, that of Majorelle with inlaid panels occupies a large space, but does not meet with much approval.

Let us pass to Belgium. The Belgian artists received the proposal of the International Exposition with an enthusiasm which we regretted very much to see absent among the French artists. For this Belgian enthusiasm we are indebted to my friend Fièrens Gevaert, of Brussels, a very distinguished writer on art, and an ardent apostle of our sweet ideals. It was he who stirred his countrymen up to give their help to our International Exposition, and with success. Only he did not succeed in making Vandevelde exhibit, one of the first renovators of decorative art in Belgium. This has been much regretted; but as he had assigned the manufacture and sale of his work to an industrial firm, he was not free.

Besides Vandevelde, however, Belgium has ardent renovators, such as Messrs, Hanvear, Horta, Hobé; the first named died two or three years ago, but the two others have greatly contributed to the success of these sections at the International Exposition. Horta is the master in the Belgian section at Turin. He has furnished two rooms and has brought from Brussels a mass of photographs which show us the entire breadth of his talent and his originality. They are photographs of architectural work, starting from his beginnings, timid as yet and linked more or less to tradition, leading up to the famous "Maison du People," the People's House, in a logical modern style.

The logic of M. Horta's architectural style is obtained by the suppleness and the simplicity of the forms, and its modern character is due, above everything else, to the use of iron. In his furniture, M. Horta is less successful at Turin than he is generally; and after looking at his architectonic work, one places his furniture into second rank. It is said that M. Horta executed their designs in haste, then fell ill, and could not supervise the execution of the furniture exhibited. However that be, the Belgian master triumphs at the International Exposition as architect, and on that point his success is incontestable.

M. Hobé has furnished two interiors in a rather personal style, seductive in their naïvetè and repose. This repose contrasts with the awkward restlessness of Horta's furniture, and it harmonizes very well with the pictorial decoration which is spread above the furniture on the walls of M. Hobé's interiors. These pictures are the work of M. Wytsman, and represent Flemish landscapes, with long straight canals, belfries and notched gables. Exhibited by the side of M. Horta's rooms they are very simple compositions with figures personifying Action, Ideal, Energy, Beauty.



DOOR TO A BATH ROOM.

Richard—Ginori, Milan.

I pass by a room by M. Sneyers, a studio for an art worker, in indifferent taste, and point out to you a room by M. Van de Woorde, which recalls the Empire style, with very interesting fabrics. I want also to mention the applique embroideries of Mme. De Rudder, executed in collaboration with her husband M. Isidore De Rudder, a distinguished sculptor, and want to give you the name—underlining it—of M. Wolfors, a Belgian jeweller of the first rank, who loves exquisite and delicate coloring. I have been told, regarding M. Wolfors, that he has, at Hulpe, attached to his summer residence a sort of zoological park, where he keeps peacocks, turkeys, gold-necked pheasants, flamingoes with slender legs, Cochin China fowls, covered with gorgeous plumage, and other singular and magnificent birds, which in turn serve him for models.

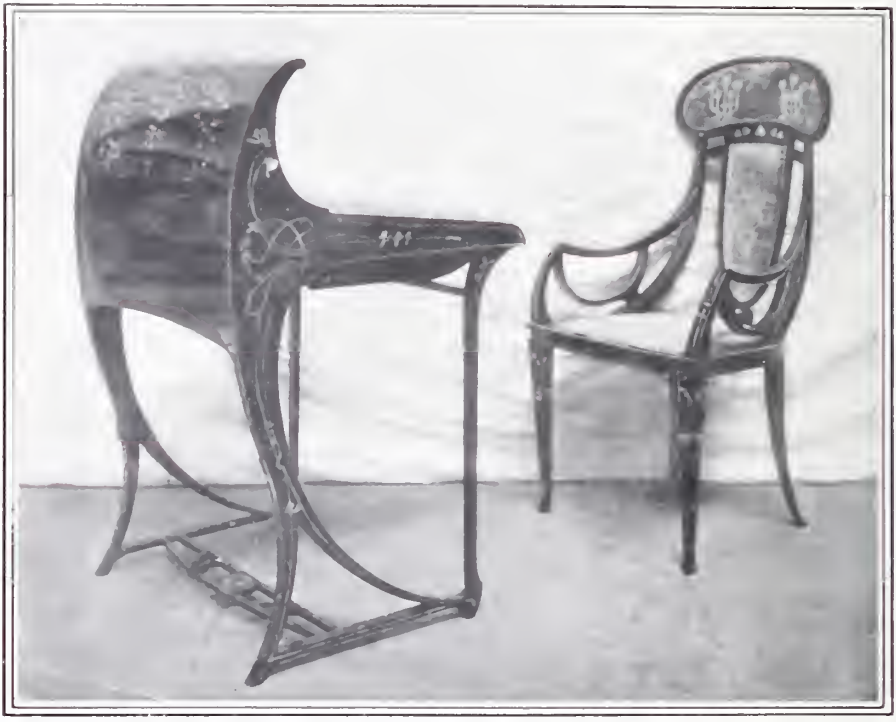
Before leaving the Belgian section, where, Vandevelde being absent, Vandevelde's style cannot be seen, I must make a general remark: that the "whip lash," I mean to say, the undulated line which was a creation of Vandevelde's, is about to be abandoned absolutely, and the nervous restlessness is being supplanted by the repose of the straight line, not only in Belgium, but in Austria, in Germany. In France, on the contrary, the curve has still the upper hand in furniture, for France cannot forget its Louis XV., while Italy is seeking her own way. I want also to say that Turin demonstrates that the decoration which has its source in nature is in decadence; decoration must be reduced to an ideal and abstract form and must become purely an invention of the brain; in this sense, M. Vandevelde was a precursor.

I come to the section of the United States, and I mention in first line Mr. Louis Tiffany, I mean the exposition of the Tiffany Studios. Nobody, with us, was ignorant of the existence of the Tiffany favril glasses, as little as of the existence of the lamp mosaics, the vases of this famous North-American manufactory, especially since the Paris Exposition, or of the success of the Tiffany Studios. Tiffany was talked about in Europe as he was spoken of in his own America; and our International Exposition could not do without an exposition of the products of the Tiffany Studios. The United States section opens therefore exactly with the Tiffany Studios, who have brought from New York very remarkable pieces, glass windows of a magnificent harmony, vases colored like the sky on an autumn day, lamps with shades of rich and thick-set polychromatic glass mosaics: all this creates profound enjoyment, day after day. Thus the success of the Tiffany Studios has been as complete as any at Turin. One could not say as much of Tiffany & Co.; their gold ware appears sometimes deficient in form and not always inspired with that æsthetic freedom which accompanies the product of the New Art. By the side of the success of the Tiffany Studios one

STAINED GLASS WINDOWS.

By G. Beltrami. Designed by M. Buffa.

must record that of the Rookwood Pottery, of Cincinnati. The collection of vases of this famous manufactory, vases simple in design and of a deep wonderfully transparent coloring, has met with a striking success at the International Exposition. I shall abstain from mentioning some little masterpieces which I found there, in order to speak at once of the triumph of the artistic bronzes by P. W. Bartlett and of the somewhat contested success of the Grueby Faïence Co. But with still greater reservation must I speak of the exposition of gold ware, excessively rich, of the Gorham Manu-



ENAMELED DESK AND CHAIR.

C. Zen, Designer.

facturing Company, the New York silversmiths and goldsmiths, who have done all they could in order to assert themselves seriously; but, by the side of some rather pretty pieces, there are several of doubtful charm and in a taste of which does not agree with the purposes of the International Exposition. The Turin Exposition wished to receive the efforts of artists toward the renovation of artistic forms, and certain pieces of the Gorham Manufacturing Company, while executed with perfect conscientiousness, remind one of Louis XV., even of the Renaissance, something which was exactly not demanded at Turin. However, the Gorham Manufac-

turing Company has been appreciated in those of its objects which appear to deviate less from the new way.

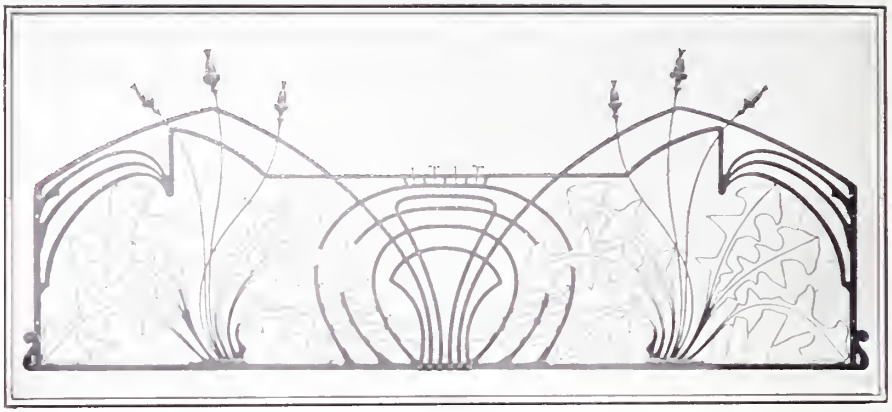
There has been exhibited, at Turin, a sleeping room by the Pooley Furniture Co., of Philadelphia, which meets with much approval at its low price, a modern bathroom by the Standard Sanitary Manufacturing Company, of Pittsburg; and on the walls of the section, we see architectonic tableaux and photographs of the architects Shepley, Rutan & Coolidge, Charles I. Berg, Carrère & Hastings, and the large design of the Metropolitan Museum of Art, of New York, the work of R. M. and R. H. Hunt. This shows that even though the exhibits of the United States at the International Exposition might have been more considerable, it demonstrates sufficiently the powerful activity of North America in the decorative arts and in architecture. I will add, my mind being fixed on your great country, that the lovers of the artistic renovation which interests us are expecting great things from North America, especially. Your artists are not laboring under the yoke of traditions; you have youth, strength, intelligence and money; you have, therefore, everything which is necessary for accomplishing a great result in our field.

Coming to the Dutch section I want to mention an interior executed after the project of Wegerif by Uilerwijk & Company, a Dutch kitchen, a real domestic sanctuary, with inlaid furniture, "batiks," and an apartment by T. Binnentinus, an inexpensive ensemble of rare distinction. This ensemble, at a moderate price, is the more remarkable, since the International Exposition lacks that class. The Turin Exposition is provided with rich halls, and with luxurious apartments, but the most sympathetic side has been neglected there. For the inexpensive pieces ought to stand in first line in an Exposition of the New Art. The economic element is essential for our æsthetic ideal, which must necessarily lead to art as a social function, to the Democratic Art, to the Art of the People.

At Turin, this point had been thought of, and among the special prizes—the highest one, of $1,600, was destined for an "ensemble de luxe" of at least three rooms—a prize of $1,000, had been set out for a modest ensemble, as another prize was set out for a "chambre de luxe" ($800), and one for an economic room ($500); but the exhibitors responded very timidly to the attempts of the committee, thus avoiding, in my view, the true path of the New Art.

A large well lighted room is filled with vases, bronze work, embroideries of the Japanese, but in its entirety this exhibit is far below what it might be and what it ought to be, and it is better not to speak of it at all.

Coming now to the end of this long excursion through the halls



FIRE SCREEN.

A. Mazzucotelli, Designer

of the International Exposition at Turin, the reader must have noticed that we really have before us an exposition of great importance, from the point of view of the competition of foreign countries, as well as from the æsthetic point of view. For, the First International Exposition of Modern Decorative Art, this first festival of the New Style, is really the official consecration of the movement which sends to renovate, and does renovate, the images of the beautiful.

Alfredo Melani.

STAINED GLASS.

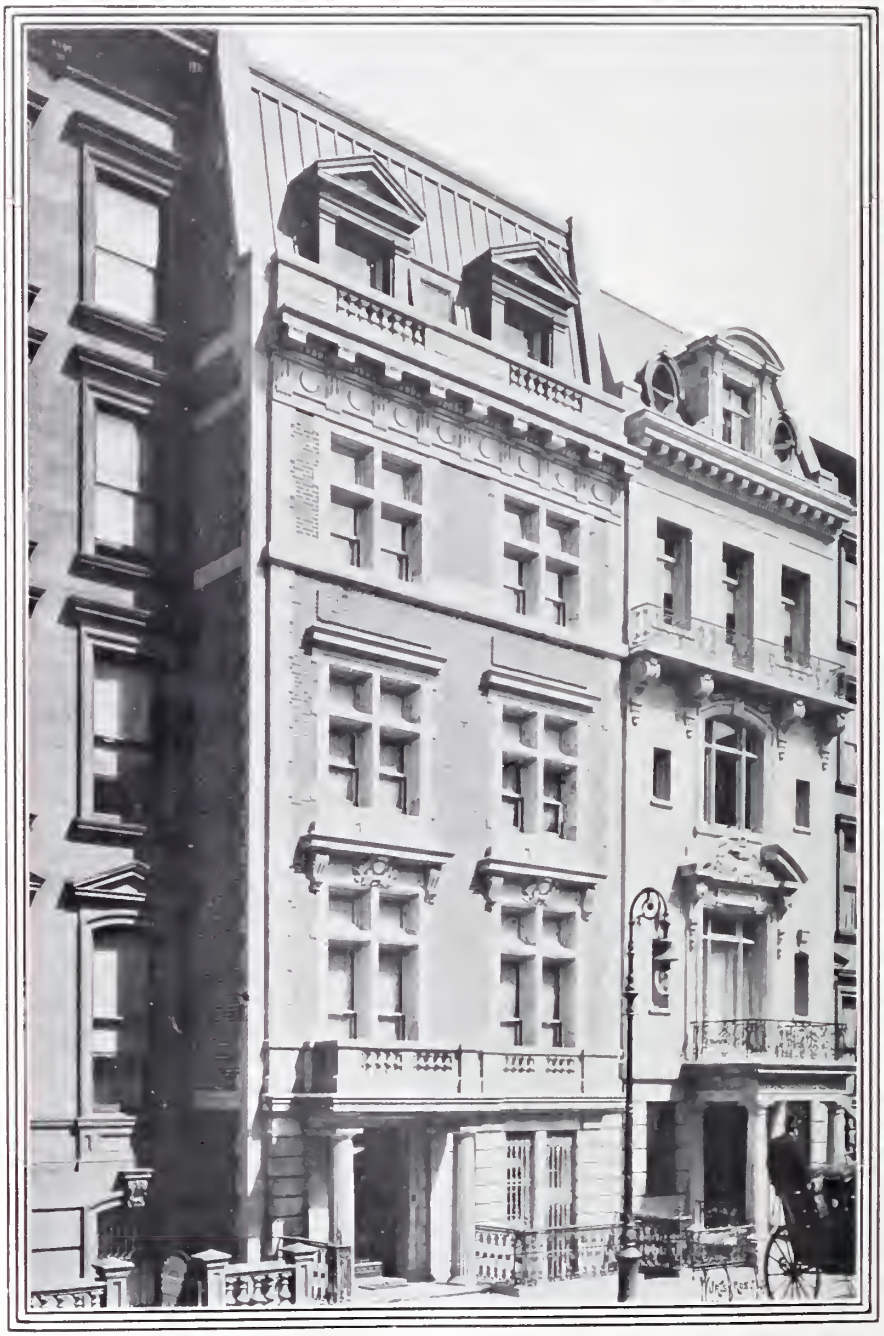
M. Buffa, Designer.

THE ARCHITECT'S PORTFOLIO

OF

RECENT AMERICAN ARCHITECTURE.

A CHRONICLE IN BLACK & WHITE



THE CURTIS HOUSE.

No. 9 East 54th Street, New York City. York & Sawyer, Architects.

DRAWING ROOM OF THE CURTIS HOUSE.

No. 9 East 54th Street, New York City.

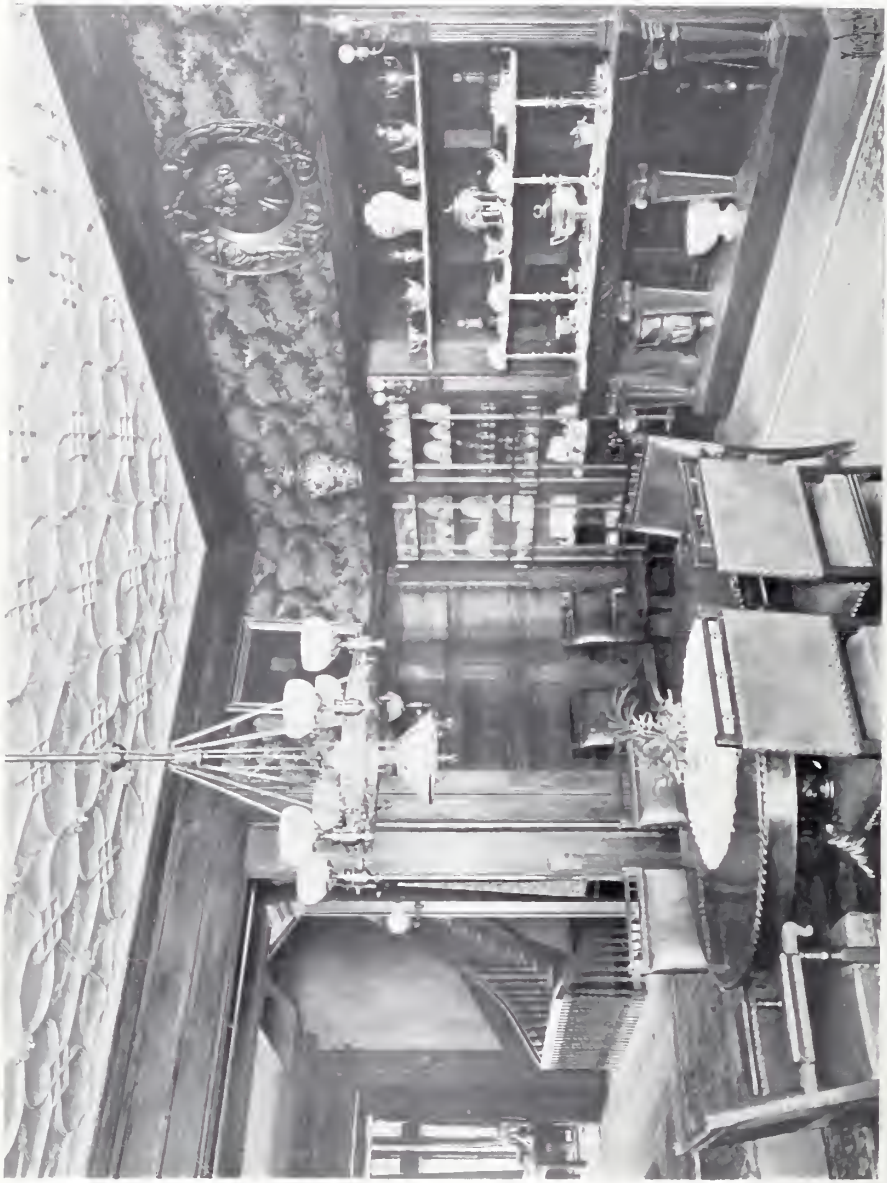
York & Sawyer, Architects.

DRAWING ROOM OF THE CURTIS HOUSE.

No. 9 East 54th Street, New York City. York & Sawyer, Architects.

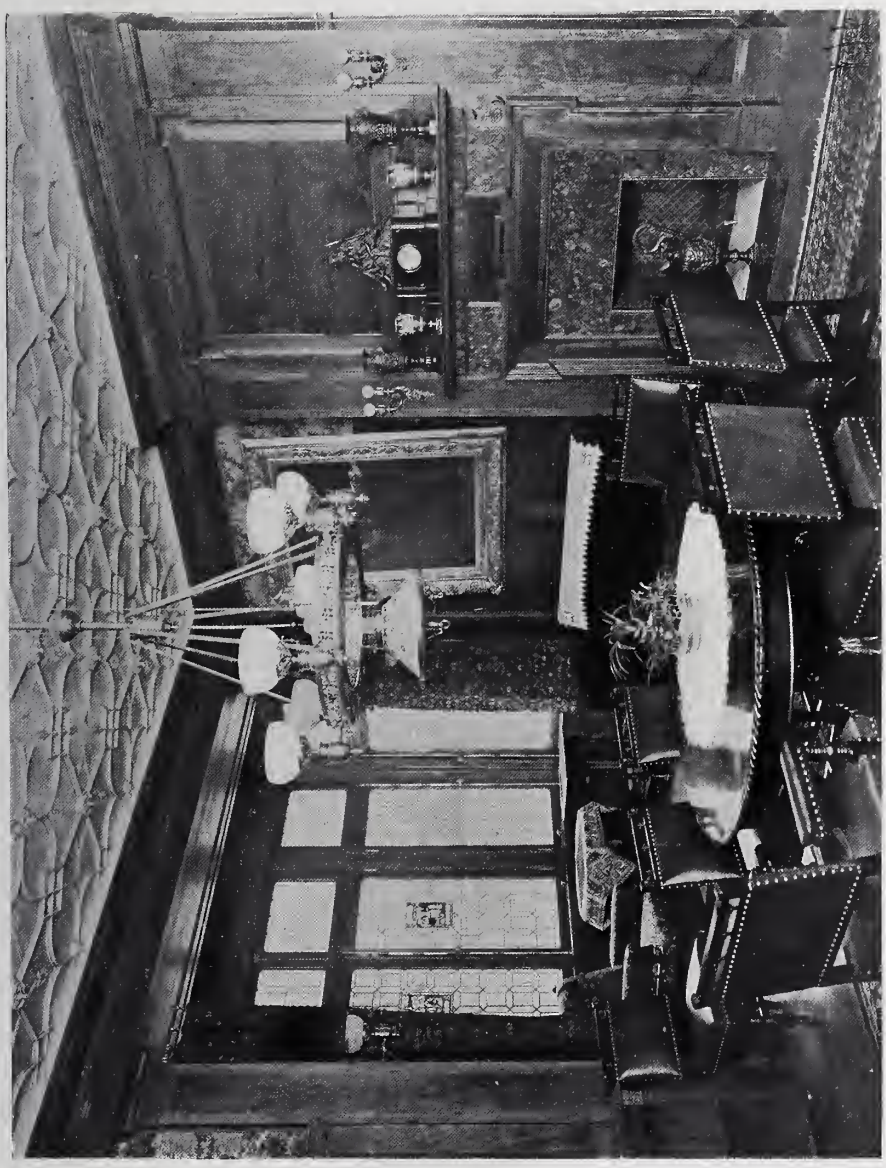
HALL BETWEEN THE DRAWING AND DINING ROOMS.

No. 9 East 54th Street, New York City. York & Sawyer, Architects.



DINING ROOM OF THE CURTIS HOUSE.

No. 9 East 54th Street, New York City. York & Sawyer, Architects.



ANOTHER VIEW OF THE DINING ROOM OF THE CURTIS HOUSE.

No. 9 East 54th Street, New York City. York & Sawyer, Architects.

CLUB HOUSE OF THE TAMMANY CENTRAL ASSOCIATION.

No. 207 East 32d Street, New York City. Robert T. Lyons, Architect.

OVER THE DRAUGHTING BOARD.

Opinions Official and Unofficial.

Some years ago Mr. P. B. Wight, the architect, proposed the formation of a guild of painters as a partial cure for the aimless individualism, which in his opinion infected that branch of American art. The proposal aroused a little discussion, but it was scarcely noticed by the painters themselves; and quite apart from its abstract merits it could scarcely be seriously considered in a country, the painters of which cannot even effectively unite for exhibition purposes. And now Mr. F. Wellington Ruckstuhl comes along with a similar proposal for a guild of sculptors. Mr. Ruckstuhl is impressed, as well he may be, by the great opportunities for the sculptural adornment of public parks, buildings and monuments, which will come the way of American sculptors during the next generation or two. He wants these opportunities to be used in a large and representative spirit; and he suggests that an association of the best American sculptors, provided it were organized and regulated in the proper way, would enable the leaders of the craft to carry out more effectively the most important and elaborate works of public sculpture. He does not propose that the masters of the guild should devote their whole time to the guild-work. They could reserve at least half of it for any private jobs, which might come their way. But he wants all important public monuments to bear, as it were, the stamp of the guild—to be the result of that careful criticism and, perhaps, sympathetic encouragement, which one craftsman is capable of bestowing on another; and he holds that the guild would have a useful influence in at least three different directions. In the first place, with such an association at their back, the best American sculptors could claim by right the opportunity of designing the greater public monuments; and their opinions on matters of public importance connected with their craft would obtain an authority, which, under existing conditions, is denied to them. In the second place the guild studio would naturally become a school, which could offer to young sculptors an unequalled opportunity for technical training and experience, and, perhaps, artistic inspiration. And finally it would increase the scope, the dignity, and the importance of American sculptural art.

Committee-Meeting Sculpture.

The obvious comment upon such a proposal is to deny its practicability. Neither the sculptors nor the public are prepared to

grant such a guild the authoritative control suggested by Mr. Ruckstuhl. The secessionist spirit is rife among the artists themselves, so that it is utterly improbable that enough of the better sculptors could be gathered into an association, which demanded so much of its members. But even assuming the association to be formed, it is equally improbable that either the public officials or public opinion generally would be willing to give to the guild a monopoly of the important works of public sculpture. Americans are quite willing to take orders from their political and industrial leaders; but in respect to art, literature and the intellectual life, they have no respect at all for the principle and practice of authority. They would not accept the guild at its own valuation. Local sculptors would insist upon special rights. The newspapers would protest against the sculptor's Trust. In the end the guild probably would not succeed in getting as large a share of the public work as its several members now get individually.

While such comments are obvious, however, it may be doubted whether they are conclusive. While at present the guild would unquestionably be extremely difficult to organize, the idea of associated work is spreading among American artists. In many notable instances, such as a World's Fair, and certain large public buildings they are obliged to work together. The number of such jobs is increasing, each one affording a good opportunity to teach artists the discipline of associated work, and public opinion, the value of it. And then, in general, although American artists have not as yet shown much power of effective organization, the spirit of association, which is undoubtedly present to a remarkable degree in American life may spread even among the artists. Our countrymen rarely like to go it alone. The artists, it is true, have hitherto as a class been obliged to go it alone, because their ideal of art is very different from the popular ideal, and because consequently they are united rather by ties of common technical purposes rather than by the deeper and more fertile ties of common thoughts and feelings. But we believe that the time is rapidly coming, when this nonconformity will no longer be as necessary as it is, and when this American spirit of association may meet with less resistance among these peculiarly and up to the present justifiably insubordinate people. In fact, we shall not be surprised to witness with the next generation, not only of one, but of several such guilds.

But if they are formed, they are much more likely to do the small rather than the great works of the public sculpture. Mr. Ruckstuhl protests against what he believes to be the paltry individualism of our native sculpture. His guild is proposed chiefly for the purpose of counteracting this pernicious influence. Yet it is by no means a sure cure for the evils of individualism in American sculpture and

painting—it is by no means a sure cure merely to multiply the individuals who participate in the best work. A foreign-born observer of the American democracy has recently made the remark that our countrymen, when they need a genius, appoint a committee. Probably, the permanent committee of sculptors, that Mr. Ruckstuhl proposes could put together and execute a better piece of public sculpture than any good but ordinary craftsman could individually; but their work, under modern conditions, could not get any large and impressive imaginative propriety. What American art needs is not less, but more individuality; and when the great individual comes he does not need the assistance of any permanent committee. One cannot conceive Rodin, or our own greatest sculptor, Mr. St. Gaudens, doing his work under such restrictions. The organization of a number of smaller men might improve the quality of all of them; but the really great man does not need any such social machinery to make his work transcend the feebleness, the irrelevance, and frequently the mere impertinence of an excess of artistic individualism.

Investigations at Assos.

The Archæological Institute of America has just issued Part I. of a complete account of the result of the excavations as Assos, undertaken during the years 1881, 1882 and 1883. One report has already been issued in 1898, as the second volume of the classical series of the Institute; but it contained only the description of the Temple, leaving untouched the other very interesting monuments of the old city, namely, the baths, the Stoa, Bouleuterion and other buildings around the Agora, the Theatre, the Gymnasium, the Fortification Walls, with their various gateways, the Street of Tombs, and many architectural fragments. The present publication is going to be as complete a record as possible of the results of the expedition. It includes reproductions of drawings and photographs of the buildings investigated, as well as of the coins, figurini, and the objects discovered in the Street of Tombs. It is intended to give the reader, so far as possible, an exact presentment of what was actually found at Assos by drawings showing the existing condition of each building, and the dimension of each fragment. The text, so far as it relates to the history of Assos, is taken with but few changes from an early report by Mr. Clarke, published in 1882. The editor, Mr. Francis H. Bacon, is responsible for the descriptive text and notes on the different buildings. A copy of Part I. of this publication may be seen at the office of the Architectural Record, Nos. 14 and 16 Vesey Street.

In an address before a western architectural association, Mr. George F. Pentecost recently took up a discussion, of which one hears a good deal in the private conversation of architects. He entered into a full consideration, historical and critical of the relation between architecture and landscape architecture as professions. He pointed out that during the classic period of Italian gardens, there was no difference at all between the architect and landscape architect, and that the difference arose during the 18th century, when landscape gardening was somewhat violently divorced from architectural design. During this same period the fundamental principles of landscape design were neglected and obscured; and the belief came to prevail that almost anybody could lay out the grounds of a house, and plan and plant a garden. Recently, however, with the revival of the formal garden, there has come a renewed interest in landscape architecture. There is a special course in that branch of design at Harvard. Many landscape architects are hanging out their signs, and are competing with architects for the work of laying out country places. Mr. Pentecost in the address mentioned above holds a brief for these landscape architects. He believes that the work they are seeking to do can be done better, in case architecture and landscape architecture remain separate professions, because the whole modern tendency in the direction of specialized work operates both logically and practically in favor of separation. The proper arrangement from his point of view would be for the landscape architect to lay out a country place, fix the location of the house, and of the other buildings, prepare the scheme for grading and planting the land, and design the gardens, balustrades, pergolas, summer houses and the like. The buildings themselves, he generously leaves to the architect, who must necessarily plan and design them in subordination to the general scheme laid down by the landscape architect. According to this arrangement the latter is to occupy the same relation to the latter as a sculptor does who models a statue to fit a certain niche which the architect has planned. Such is a very insufficient summary of the substance of Mr. Pentecost's address.

Architects and Landscape Architects.

Before discussing the question whether such an arrangement would be likely to work well, or would be acceptable to the architects, it is as well to inquire what the tendencies are of existing practice. After a careful examination of the field, we should say, that while there are a certain number of landscape architects, who are not at the same time architects, and while they are getting a certain share of the work, the bulk and the cream of it goes to architects, who are at the same time landscape architects. Of the

contemporary gardens illustrated in the book of "American Gardens," edited by Mr. Guy Lowell, four out of every five are designed by architects like McKim, Mead & White, Carrère & Hastings, Mr. Charles A. Platt or Mr. Wilson Eyre, Jr. The last two of this list make a specialty of landscape design; but they design proportionally to their total work as many houses without gardens, as do Messrs. McKim, Mead & White houses with gardens. Any one of these gentlemen, or, indeed, any American architect of like standing would object as much to the statement that they needed a landscape architect to lay out the grounds around their houses, as they would to the statement that they needed an interior decorator to design the hangings and furniture of an elaborate room. The influence of these designers over their clients is such that they will be able to get the work if they want it; and want it they undoubtedly do. The Park Commission of Washington consisted of two architects, one landscape architect and one sculptor, which suggests that Mr. Pentecost's arrangement may be reversed, and that landscape gardeners will be called in by the architect to do the planting (just as interior decorators are called in to supply the materials) instead of architects being called in by landscape designers to plan the house.

Surely an arrangement which puts all the problems connected with designing a particular place into the hands of one man or firm is to be preferred both on practical or theoretical grounds. It does not make any difference whether you call that man an architect or a landscape architect. The point is, rather, that the whole design, house and grounds, should be imagined and worked out by the same designer. As many men as you please—sculptors, painters, planters, and interior decorators, may be called in actually to execute the design, but for the design itself one man or firm should be responsible. Any conscientious and capable landscape architect, who could design pergolas, balustrades and summer houses, would naturally want also to design the residence that entered into inevitable architectural relation with such landscape furniture; and vice versa, any architect, who designed the residence, would naturally want to design also the balustrade that outlined the terrace, or the pergola that dominated the garden. We believe that as a matter of business policy a landscape architect, who felt unable to design and plan a house, would do well to take in a partner who had no such limitations. As to the architects we doubt whether they ever distrust their power either to lay out a country place or to design a garden. At most they would call in some horticulturalist to prepare the soil and do the planting. And this arrangement, which is the more convenient is, also, preferable on purely æsthetic grounds. If the specialism, which Mr. Pentecost urges, should come to pre-

vail, the profession would soon be broken up into all kinds of architects. A much better case could be made in favor of leaving the designs of "sky-scrapers" to engineers who would employ architects to design the "decoration" than Mr. Pentecost's can make in favor splitting in two the problem of designing a country place. The architect, if anything, is the man who designs the whole scheme, and lays down the work for the various specialists—scientific, mechanical, or artistic—to execute. Not all American architects have as yet had the experience or the training to work out a design which gives the coöperating craftsmen their proper chance. The walls they have for the painters are not always what the painter would like; the general plan of their garden is deficient in open air feeling; their pergolas and summer houses, sometimes look more like stage scenery than like appropriate architectural furniture; but none of these faults could be remedied merely by having specialists coöperate in the design. The power of creating a design that contains an inevitable place for the accessory arts will come with opportunity and practice—else American architecture will always remain at its best merely a mass of tasteful adaptations.

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